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Photo by Aaron Forde

**Special thanks to our major sponsors:**

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WILDLANDS SCHOOL
SCHOOL DISTRICT OF AUGUSTA
AUGUSTA HIGH SCHOOL
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AUGUSTA, WI 54722

# Tracking Fish

Ask anyone who knows me and they'll tell you that I like fishing. Better make that "love fishing." So you can guess that I was pretty excited when I learned that I had the opportunity to tag and track smallmouth bass for a school project. Not only would I gain greater insight into the habits of my favorite quarry but I would also be able to learn a lot about telemetry technology and ArcGIS mapping software. I picked Lake Altoona as my study site because of its proximity to the school and because it is a pretty good representation of most Wisconsin smallmouth waters. This second item was critical in order to make the results of my study useful on other lakes. After doing some research on similar studies conducted in the past I decided I would need to tag five bass in order for my results to accurately model the habits of the entire smallmouth population versus those of individual fish. Since the school only had two transmitters it became necessary to seek sponsorship support to fund the three remaining transmitters. After sending sponsorship requests to several of the leading groups in the fishing and conservation industries I decided I had better get out and install the two tags that I already had. This meant the next step was… You guessed it...Going fishing!

Fellow student Dan Wiersgalla and I headed out at 10 a.m. on Oct 7, armed with video cameras, telemetry equipment, and enough fishing gear to sink the U.S.S. Mississippi. Unfortunately the fish weren't too impressed. Still we stuck at it, and after seven hours of tough fishing we were able to get both our tags out, securely attached to the dorsal fin of two 13" smallmouth. Not big fish, but big enough to get the data we needed. Mission accomplished!

The next thing to do is to locate and log the fish's positions twice per week using a radio receiver and a GPS while I wait for the other three transmitters to arrive. Once all five fish are tagged I am planning to follow their movement until they spawn early next June. I will also be monitoring environmental factors like water temperature and weather patterns to determine how they affect the movement of the fish. After I have filtered all the data collected in this study I should have very accurate model of the behavioral patterns of smallmouth bass that will be useful to both fishermen and fisheries management teams alike.

P.S. I would like to give out a hearty thanks to the **Wisconsin BASS Federation Nation** and **Scheels All Sports** for providing the funds that were needed. Because of their generous gifts I have been able to successfully outfit three more bass with transmitters and am ready to begin tracking.

Tim Kubetz - 12th Grade

Pictured above is the tracking device Tim attached to the bass

# Trappers Cabin Stove

Yet again we have been given a new toy to play with at Wildlands. Mr. and Mrs. Fred and Kay Magadance generously donated what seemed to be something from the stone ages. This contraption turned out to be a stove from the early 1900's. The model is originally a 1908 Malleable Stove made by Wrought Iron Range Co. from Missouri. Mrs. Magadance has said that this stove has been in her family since they bought it all the way back in the 1900's.

This donation of the stove is very helpful to add on to our "Trapper's Cabin" project that started last year. If you're not familiar with the Trappers Cabin project, it is the revamping of a cabin behind the school to recreate and very closely resemble a cabin from the Wisconsin pioneer and trapping days from the 1800's.

We hope to use this stove in the future as a source of heat in the cabin as well as using it to cook "traditional" meals from back then. We might get to throw in a pizza now and again, too. Thanks again Mr. and Mrs. Magadance!

Kay and Brittni with the stove.

# Bait Making

Fishing lure making is a long and creative process. It usually takes a good wood worker and lots of time. Tim and I thought one day, while we where fishing, that we should make lures to use. Then we talked to Mr. Tweed about how we could make a project out of it, and he suggested making it into a business.

So we sat down and made a business plan. Then, we found out how much it would cost for each lure and all of the supplies. After we did that, Mr. Tweed said that we would have to find sponsors to help pay for it all. We're still working on that...hint, hint. But, we are up and running.

The first step is cutting and shaping a blank piece of poplar wood. We use a lathe, then we spray paint it with white paint. By doing this it makes the next layers of paint really shine and stick out. After that we just keep painting it and after all the painting, we give it a good layer of lacquer, which is a sealant that makes the wood harder and more resistant to damage. It takes about 150 hours to make one bait, but most of that time is drying paints and finishes.

The day we decided to start making lures we thought it would be fun and a good challenge. When we gave the idea to Mr. Tweed he thought it would be a great project, but he had the greatest idea when he suggested we sell them. Now we are looking for sponsors *and* places to sell them.

Dan Wiersgalla - 10th Grade

*Wildlands Precision Baits* logo designed by Mary Beth Wold and Tim Kubetz

Dan sanding down one of the lures

# Fitness for Life

This year at Wildlands three of my friends and I are doing a project that compares our heart rates, lung capacity, BMI, and flexibility. We ordered three heart rate monitors for us to collect our data on and to get started completed a bunch of physical strength and endurance tests. It is going to be an exciting project.

When students have a project that they're interested in, they put it into something called Project Foundry, where they explain to the teachers what they want their project to be about and then talk to them about it after it is approved. Talking with Mr. Tweed about the project really opened my eyes to how much more we could incorporate in this project and just how much deeper we could go then just comparing heart rates.

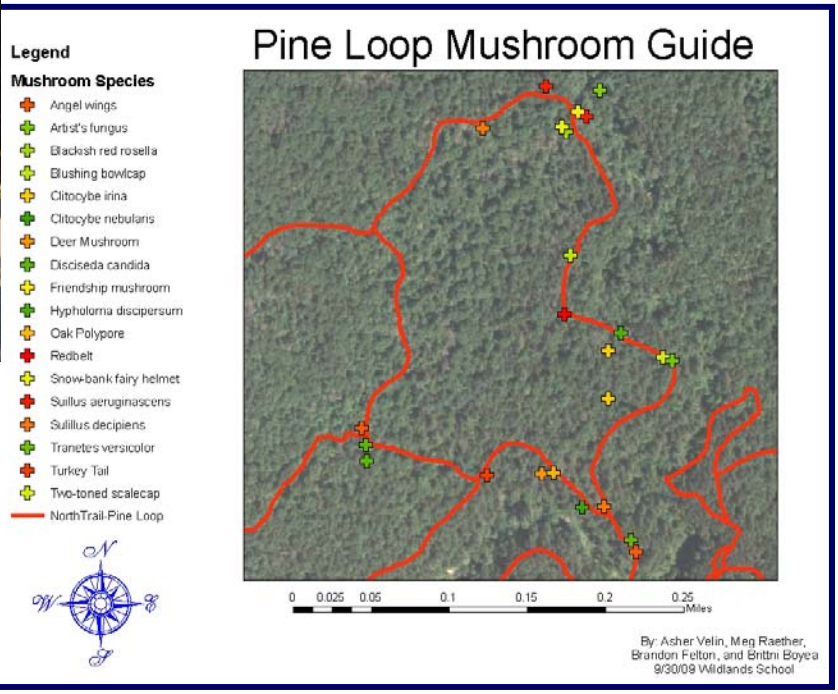
For instance we can not only check our heart rates but also our blood pressure, lung capacity, and the amount of calories we burn. We also talked about when to check all those things. At first, we were going to do a certain exercise (like 50 jumping jacks) for one week and check our heart rate every day after we finished. We would then find the average heart rate from doing the exercise for the whole week and put that on our chart. But after talking with Mr. Tweed we decided that we should do a certain exercise at the beginning of the month and check our heart rate, blood pressure, etc. Then we would do a bunch of different exercises throughout the month. When the end of the month came we would do the same exercise we did on the first day and check our heart rate, blood pressure, etc. and compare. We plan to do this every month throughout the school year using the same exercise on the day when we test our heart rate, blood pressure, etc.

After every month we will record our data on a chart/diagram so that we can compare throughout the year. We expect there to be a big change on our charts as we hopefully improve our exercising skills. Our charts will be on the computer and on paper so that we can get experience for recording data in both places. Some of the areas we will get credits in are: Physical education, science, and health. I really like working on my projects, especially this one.

Rebekah Wood - 10th Grade

Above: Rebekah sprinting for one of the fitness tests.

Right: Species map the mushroom team made for their project.



# Bug Project

This fall four students, Sam, Isaac, Sarah, and myself (Mike), did a project collecting and identifying different insects. We are are going to make a bug board with the insects and include a map of the bugs' locations when it was captured. This project started mid-September and went until October 2nd.

The first step was to catch the insects. Then, we had to mark the location where we caught the bug. When we caught a bug, we put it in our "Killing Jar." It's called the "Killing Jar" because we put ethyl acetate on a sponge and placed it in the jar. Ethyl acetate gives off a gas with a very distinct odor. When it's in a small place where it can't escape, it becomes deadly to insects. It takes anywhere from an hour to a full day in the jar to kill them. We killed them to preserve them for handling and to make a display to show them off.

After the bugs die, we remove them from the jar and pin them to a board using entomology pins. We pin the bugs through their thorax. Once they're all pinned, we use five magnification zoom lenses to identify the bug. We try to figure out the common name, class, family, genus, and species of the bug. We were able to get most of the information that we needed for the bugs, but we couldn't find the species on a few of them.

We caught many types and kinds of bugs, such as two butterflies, one moth, one katydid, and many bees. Besides learning about many different insects, this was a fun project because we got to be outside in the great September weather!

Mike Barton - 9th Grade

# Home-school to New School

I have been home-schooled since I was in Kindergarten. I was just about to enter ninth grade and my parents' friends told them about a charter school called Wildlands. This school is at Beaver Creek Reserve, and we were familiar with the Reserve from past fieldtrips, but not the school.

My parents took us to the open house the staff told us what the school was and how everything worked. They said that most of the things you do are outside. I'm an outside person, so I liked that idea. It sounded interesting, but I still didn't know if I wanted to go because my mom had always been my teacher. I didn't know if this school would be really hard, or too easy. I just didn't know. My parents told me to think about it. I thought hard and decided to give it a try; I thought, 'Why not try something new.'

It had only been a week into the school year and I loved this place already! Everything you did was outside and I thought that was awesome! I mean you'd have a science project outside and you'd go do it, but it also had math in it and physical activity. Sometimes it had English in it too because you'd have to write something about what you did or something related to your project.

The people here are really nice too. I knew some people from homeschooling who attended Wildlands, too, but the awesome thing is that I'm getting to know them better. I'm so glad that I decided to go to this school because things have really changed and it's made me more social then I was before. A quarter of the school year has already gone by and the decision I made about coming to this school was a great decision! You're always doing something; you're never just sitting around trying to find something to do. This school is fun, yet we work hard.

Sarah Rosenquist - 9th Grade

# The Great Mushroom Hunt

Personally, I don't really like the taste of mushrooms but the thought of identifying them was very interesting to me. So this became one of my first projects of the year. I was working on it with Meg Raether, Brittni Boyea, and Brandon Felton.

The idea of the project was simple: identify mushrooms on one of the trails and make an identification guide and map. We chose to use the Pine Loop, which is one of the northern trails at BCR. We gathered our materials and went out to hike the trail.

When we spotted a mushroom close to the trail, we marked its location using the GPS (this location is called a waypoint). Then we took pictures of the mushroom and put it in a bag so we could take it back to the lab and identify it. Picking a mushroom is like picking an apple, it will grow back the next year in the same spot; so the mushrooms we picked this year will be there again next year.

Once we got back to the lab, we got out some mushroom identification books and tried to find out what mushrooms we had. Identifying them was very interesting; sometimes we had to cut them in half and see what they looked like inside, or we had to look at the "gills" on the bottom of the mushroom. It was never quick and easy to find out what kind of mushrooms we had.

We made a map of the mushroom locations using the waypoints from our GPS. We used ArcGIS (a computer program that makes maps by combining areal photos with data from a GPS) to combine a map of Pine Loop with the waypoints (which turned into marks on the map) and we color coded the points based on the kind of mushroom. We added a legend on the map that showed what color was what kind of mushroom. (Pictured on page 2).

We put the mushroom pictures in a PowerPoint slideshow to go along with the map. It was hard taking good close up, detailed pictures of a mushroom. Some of the pictures didn't turn out very good, but a few looked really nice.

This was a very interesting project for me, and I learned a lot about using ArcGIS and identifying mushrooms. Sometimes identifying the mushrooms was challenging, but in a good way. I think I should do some more mushroom identification sometime so I can get better at it. I look forward to all this years' future projects.

Asher Velin-11th Grade

Wildlands Students are tracking a rabbit this fall using radio telemetry—updates soon!

# USMS—I want to be a part of it

During our camping trip in Black River Falls, Mr. Tweed had us sit in a circle around the fire, and asked us what our ideal career was. After each one of us told him, he would ask questions like, "Exactly what would you be doing?" and "Do you know what you have to do qualify for that?" For a while now I've been thinking about joining the U.S. Marshals after college, and Mr. Tweed's questions made me realize that besides going to the Marshal's website occasionally, I haven't looked into it very much. I chose that for my first project this year, I wanted to research the U.S. Marshals.

One of the first things that I found out was that the USMS is the oldest federal law enforcement agency in the US; the first 13 Marshals having been appointed by George Washington on Sept. 24, 1789 after the Judiciary Act of Sept. 24, 1789 was passed.

The USMS's primary focus is fugitive investigations. They currently have 91 district task forces and 6 regional task forces dedicated to finding and arresting wanted criminals. In fiscal year 2008 the USMS arrested 36,600 federal fugitives and cleared 39,700 federal warrants, more than any other federal law enforcement agency combined. In 1983, to prioritize the most important fugitive investigations, the USMS established the '15 Most Wanted' fugitive program, to go after the more dangerous fugitives, which includes sex offenders, murderers, and drug kingpins. Since then, the USMS has arrested 195 high profile criminals. Due to their experience in locating fugitives, the USMS is often called upon to train other federal, state, and local law enforcement agencies in the apprehending of fugitives.

Through my research it seems like there isn't anything that they're not involved with, and I hope that I will someday be able to be a part of it.

Riley McCormick—10th Grade

Above, a team of High School students dissect a starfish. This is part of the anatomy and physiology course they have designed to better understand systems within an organism.

# Ancient Civilizations

Have you ever wondered how life was lived in ancient times? In order to answer this question, Wildlands students: Brandon Felton, Riley McCormick, Asher Velin, and Max McCormick have started a project that deals with researching and summarizing ancient civilizations.

The purpose of this project is to get a greater understanding of the way people in these civilizations lived, who they traded with, how they declared wars, what kind of weapons they used, the way their governments worked, and the areas in which they were based. This is done by researching on the internet and taking notes.

Once we have found information on a civilization that can be verified by more than one source, we take that information and we use it to write a short essay about that civilization. These essays are broken up into different paragraphs, with each paragraph dealing the civilization's culture, religion, government, or warfare. So far, we have completed research on the Ancient Egyptians, the Celts, The Byzantine Empire, The Rapa Nui, and the Ancient Norse.

After we have written about all of the civilizations, we plan to make an interactive map which will have details about all the civilizations, and the option to click on a civilization, which will cause information to pop up in a text document.

Max McCormick - 11th Grade

# The Humble Honey Bee

Most people take honey bees, and all they do for us and the environment, for granted. I know I did until I entered a 4-H essay contest, where I had to write a paper on the dance language of the honey bees. As I was doing research for the essay I realized how fascinating the little creatures really are.

Imagine you are a scout honey bee flitting about in a nearby patch of flowers. You are flying in circles to maintain a sense of direction. You also use the sun, gravity and the polarization in the sky as a compass so you do not lose your way while searching for a plentiful patch of flowers. Once you come upon such a patch, you quickly fly back to your hive where your fellow worker bees are waiting for your return. Back at the hive you start performing a complicated dance for the worker bees who are buzzing around you. Your dance gives the precise direction and location of the food source that you have found. It may also give information on the quality of the recourse. Once you have completed the dance the workers who attended your dance quickly fly out of the hive to collect pollen and nectar using the directions that you just gave them.

As you can see, these humble insects are far from simple. That is why I have decided to do a project on honey bees this year for school. By studying and learning more about these complex insects, I will gain a better understanding of how they work so that I can perform my experiments with greater understanding and knowledge. Once spring arrives I hope to be able to raise and study bees in an observation hive I plan to build this winter. There are many experiments that I can conduct that will give me large amounts of information, but will cause no harm to the honey bees. One experiment that I can use involves sugar water and worker bees, and will give me information about how fast news about food sources travels through the hive. Amazingly, honey bees have color vision. I would like to perform an experiment that was used by the man who discovered the dance of the honey bees, Karl Von Frisch, to test that fact. I am still looking into all of the possible experiments I can conduct to better understand the dance language of the honey bees and ultimately the honey bees themselves.

I will keep you posted on the development of the project. Any suggestions, information and advice having to do with observation hives, bee keeping, and the dance language of the honey bees would be greatly appreciated! I am so exited to get this project off the ground, so I can learn about these humble insects that will make an amazing school project!

Maddie Black - 10th Grade

# Into the Wilderness

On September 23rd the Wildlands Middle School left for Black River Falls for an overnight canoe trip on the Black River. Preparation for this trip included packing all our gear into dry sacks, hauling 10 canoes and kayaks on top of the bus and trailer, and learning how to tie a canoeing knot.

Finally we were off! For our bus driver and teacher, Mr. Hadorn, the hour-long drive to our put-in site was one hour too long; made so by the shouts of boys and shrieks of girls; but we finally made it to Mason's Landing.

When we got there, we were surprised to find the water level so high. It had risen several inches since the High School had gone on the same trip one week previous. It took about ten minutes to unload the canoes and bus. While the boys unpacked, the majority of the girls had a sudden interest in their shoes, and Damin caught a few branches with his fishing pole.

Once the canoes were in the water, it was a joyride all the way to the peninsula on which we ate lunch. Since the water was so high, it made for fast, glass-smooth canoeing. Along the way, Damin and Cameron fished from their canoes on slow spots, and Matthew and Samuel had to get out of their canoe and push . After about an hour and a half of canoeing (or drifting if you were lucky) we stopped for lunch.

We were at our lunch spot for about half an hour, allowing those who were behind to catch up and have enough time to eat. Cutting our peninsula in half was a small stream that some people (amusingly and unsuccessfully) tried to dam.

From there, we had about six miles to go until we got to Irvine Landing, our takeout. The majority of people were spending their time bailing out their canoes (presumably from splash wars); so it naturally took twice as long to get to the landing as it should have. Once we got to the landing, the girls decided to get on the bus early, while the boys loaded everything up.

After we were all set, we headed over to the Black River State Forest Campground. Once there, we divided into three groups: girls, boys, and teachers, and set straight to work. Within the hour, all three groups had pitched their tents, and had roaring fires in the fire pits, except for the boys' fire. They tried all means of starting a fire (including burning the socks that had been tied to the back of the bus since last spring) until they ran out of matches and just gave up.

At about 9:30, we all gathered around the teacher's campfire and shared highlights of the day, things we learned, and scary stories. After that we all went to bed (Although I'm not all that convinced everyone actually went to sleep).

We were awakened at 9:00 to allow us time to eat and pack before we left for school. The boys all expected the girls just to hang back and watch us do the work, but remarkably, it turned out to be the other way around.

I guess everything in life has a way of surprising you, just like this trip did me. It was amazing how much teamwork was applied to make this trip a success. I'm glad I went on this trip, and I'm sure I'll feel this way a long time down the road.

James Goings - 7th Grade

# First Rate Self

Judy Garland once said, "Be a first rate version of yourself, not a second rate version of someone else." On the first day of school at Wildlands School we had to think about things that would make us a first rate version of ourselves.

Sitting around the flameless fire pit behind the observatory, the high school students talked about core values and what they meant to us. A few things we discussed were honesty, self respect, and trust. By talking about those things and other values we came to understand that at Wildlands we students have a lot of responsibility. We aren't always going to have someone looking over our shoulders here, so we need to be the first rate version of ourselves. We can't expect someone else to tell us what to do and how to do it. We have to be mature enough to know that we have to get things done to the best of our ability. There will be times when we will want to be lazy and do the least amount of work, but we have to battle that tempting urge and do a great job.

By becoming a first rate version of ourselves we will demonstrate all the core values we talked about on that first day of school. It was a great experience to hear that so many other students here, at Wildlands, care so much about those values. It makes me proud to be a student here.

Megan Raether—12th Grade

# Camping Continued...

On the 16th of September, the high school went on a canoeing and camping trip on the Black River. The section of river that the teachers had picked was a 3 to 4 hour ride, so very relaxing.

Along the way some of the students caught fish: Small Mouth Bass, Walleye, and Northern Pike. Other students simply enjoyed being on the water for school time.

On the river, we ran into sandbars and sometimes we had to get out and pull the canoes across. We also saw really cool rock formations, some wildlife, and lots of washed-out trees. After we got done canoeing, we went to the camp ground and got our campsites set-up and started making dinner. Once everyone was done with dinner and clean-up some of the students went over to each others campsites and played cards, but some just stayed and talked.

Later that night everyone had a big campfire. At the campfire we discussed what we are interested in for careers and life after high school. Mr. Tweed said that the teachers at Wildlands are there to help us with planning our careers and to help us get there. Something even a 9th grader needs to start thinking about.

I always look forward to these trips, and again I can't wait for the spring trip.

Esau Casetta - 9th Grade

# Writing the Novel Way

This year I am working through a book called *Learn to Write the Novel Way*. It is a book designed to teach writing techniques, such as how to write a novel, and I will be getting a full English credit. I am going to write a novel about a girl named Maggie. She loses her mom to a car crash after growing up without her father, who also died early on in her childhood. It begins in New Orleans, but moves to Eau Claire, WI. She moves to her Aunt Debbie's house and we will follow her throughout her trials of high school. The book will be set in the 1960's and I will be doing research so that the events and places that she goes, as well as basic descriptions, will be historically accurate. The hardest part about writing the book, I think, will be coming up with problems and conflicts for her to work through. I don't want the book to become boring. The easiest part will be coming up with the main plot and the characters personalities. My goal is to finish the book by the end of the school year. I am very excited about the book and hope to publish it!

Grace Wood - 12th Grade


Wildlands High School students attend an Environmental Conference at UW-Steven's Point with Mrs. Seubert in Nov.

Here they explain their dendrochronology project to other schools.

# Grouse Telemetry

It's the start of a new school year here at Wildlands and the beginning of my senior year. Since it is my senior year, I need an individual senior project. I got the idea for that project when one day Mr. Tweed was showing the class where everything was located in the classroom. One of the items he showed us was the radio telemetry gear. When he showed us where the radio telemetry gear was I knew I wanted to use it as part of my senior project, but I wasn't sure what I was going to track. Since I like birds a lot, I thought I might track a bird that I didn't know much about. Little song birds are too small to have the radio collars on them, and they are already being banded by the bird banders, so they are out of the question. I thought I might try one of the bigger game birds, like the Ruffed Grouse. I knew little to nothing about the bird so it made it one of the more likely candidates for tracking.

More questions popped up when I decided to use the Ruffed Grouse as the main animal in the project. How could I capture one in the fall? How large of an area is the male Ruffed Grouse's territory? How active is it in the winter and fall? How long do they live? Would tape recording the male drumming call be an effective way for making them come to the trap? These questions are just a few of the questions that got me started with this project.

So far I have a drift fence out in hopes of trapping one to collar and then track through the winter. We'll see what happens.

Brandon Felton - 12th Grade

# Influence or Coincidence?

Have you ever gone to a movie and half way through it you felt hungry for popcorn, or maybe thirsty for some soda? Could it be because you forgot to eat before you went, or could it have been a result of subliminal messages?

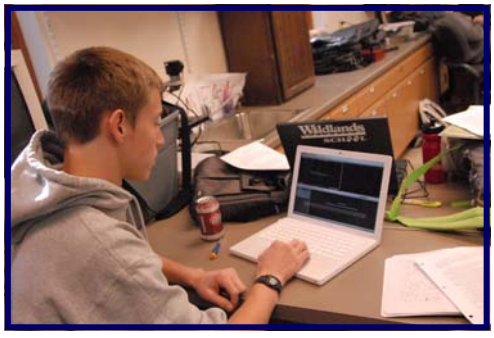
Dictionary.com defines subliminal as "something operating below the threshold of consciousness; being or employing stimuli with insufficient intensity to produce a sensation, but enough to influence the mental processes on the behavior of the individual". In short, subliminal messages tell you to do stuff without you realizing you're being told.

How this works is that subliminal messages are received by your subconscious brain. The subconscious part of your brain is what weeds out the stuff that is not necessary for attention. This stuff might be ambient noise, like the wind, or it might be insignificant visuals, like a speck on the wall. Your conscious brain will never get these messages, because if the subconscious doesn't want them, they are thrown away beyond recall or memory and you will never even think them. Another thing about your subconscious is that everything it is told is perceived as truth. If it is told that the door is locked, your conscious brain may have a strong aversion to trying the door. The only thing we think the subconscious can't do is that it cannot be influenced to hurt the body it is in, or in other words, we could not convince your brain to try to hurt yourself.

As a result of the minor controversy on the subject of whether or not subliminal messages really work, Sam Larson and Josh Rosenquist decided to do an experiment. They made two movies with random flashes of the subliminal message "Hungry? Eat Potato Chips" in them at the speed of 1/100 of a second. Hopefully the conscious part of the brain in the viewers would not see the messages, but the subconscious would. This would theoretically result in a strong liking to potato chips. Sam and Josh would then show the movies to their classmates, who after watching each movie would have to answer a random question: which do you want to eat: pretzels, Saltines crackers, or Potato Chips? If a majority answered potato chips then the experiment would have been a success. Unfortunately, only 15% of the classmates picked potato chips out of the choices above, so the fact of whether subliminal messages really work or not continues to remain a mystery.

Sam Larson - 11th Grade

Below: Sam Larson working on his movie in Apple movie editor iMovie



# Special thanks to our annual school supporters

-Rick Koziel and The Beaver Creek Reserve Staff

-Scheels All Sports

-WI BASS Federation Nation

-Joe, Kris, & Nick Perkovick and Family

-Ted & Jan Tweed

-The William Spraetz Family

-Tom Crowe

-Mary Beth Wold at Dean & Associates

-Fred & Kay Magadance

*Your name could be here! See the back of the newsletter for more information!*

# Conservationists Speak Their Minds

The County Land Conservation Commission, The Wisconsin Land & Water Conservation Association and the University of Wis. Ext. sponsored the Conservation & Environmental Awareness Speaking Contest again this year.

Middle School Students gave their speeches in front of "judges" (Thank you parents for helping) to compete for a finalist spot in the county competition. Speeches were judged on delivery, length, content information, conservation elements, and research. The judges then picked the top four finalists based on points.

On October 7th Sophie Black, Rachel Dorf, Jim Goings, and Moriah Vlcek, Wildland's finalists, went to the Beaver Creek Reserve and competed against students throughout the county. Five of those students were from Augusta. They were very nervous, but had lots of fun. Jim received 1st place and was invited to the Regional competition, and Sophie received 3rd place. Congratulations to all of our speakers and excellent job representing Wildlands School!

Mikayla Larson - 8th Grade

Wildlands Finalists (L-R) Jim Goings, Moriah Vlcek, Sophie Black, and Rachel Dorf.

This Newsletter is student written, edited, and published.

Chief Editor and Newsletter Design: Aaron Forde

Deputy Editor: Sam Larson

# Chemistry

Mr. Tweed was a chemistry teacher in Augusta for many years and was missing it too much. He decided this year anyone that wanted to learn about: the science of matter that deals with the composition of substances and their properties and reactions was welcome to join the Chem class. Of course I signed up!

Our first assignment was a Grape Buoyancy experiment. We had to make a grape buoyant in water, so it wouldn't float to the top or sink to the bottom. The only ingredients we had to use were water and sugar, and the green grape. The most important part of this experiment was recording all of our steps, measurements, and data for the experiment. We were allowed to used a balance, graduated cylinder, beakers, and a plastic spoon.

My group started by placing 20ml of water in the graduated cylinder. Next, we placed the grape into the water. After that, we would check to see where the water level was. For example if it went from 20ml to 24ml, that would be about 4 ml of water displacement. So we figured that meant we needed 4 grams of sugar. We took the mass of the sugar before dumping any into the water. We would add sugar until the grape started to be neutrally buoyant. If it was floating, we would add water to make it sink a tiny bit. We recorded everything that we did each step along the way: density, mass, amount of water before and after, sugar etc.

When we were done, each group checked their own data. After everybody finished the assignment, we all had a meeting and compared our data.

I think that this was a fun experiment. We had to play around and get a grape to be neutrally buoyant. Some people thought that water temperature might affect the grape buoyancy because warmer water contracts and cooler water expands, but that might be an experiment for a different day.

Derrick Lewellan - 12th Grade

**Students take time to play in the snow in early October. We're hoping for more soon; it leads to great winter projects!**

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____ **$20**
____ **$25**
____ **$35**
____ **$50**
____ **Other**

**Wildlands needs your support.**

Wildlands has established a 501c(3) non-profit organization to support student research and activities. If you would like to help us provide students with unique learning opportunities please use the form below. All donations are tax deductible.

**Indicate how you'd like your donation to help Wildlands!**

__ equipment/supplies
__ fieldwork/fieldtrips
__ student scholarships
__ Wildlands can decide

Your donation to Wildlands School will provide students with up-to-date research equipment, support field work opportunities, fund local fieldtrips, or support our senior scholarships. Anyway you look at it, the money directly helps our students.

**Benefits of supporting Wildlands:**

1. **With a donation of $50.00 or more, you will be recognized as an annual contributor in our Wildlands' Newsletter (see page 7).**
2. **With a donation of $500.00 or more, you will be recognized on our Wildlands' Equipment Trailer and our newsletter front page as a Major Contributor.**

**Name of Contributor(s):**

_____

**Address:**

_____

**(Internal use only. We will not give away or sell your information)**

**Thank you for your support!**

Mail this section with your donation to:

Wildlands School * E19320 Bartig Road * Augusta, WI