

How has the Drought in Spokane Affected Wildlife?

By Lindsey Person and Katie Guyer

There has been a drought in the Spokane area this year. The pond on 29th and Havana is a vernal pond. This means that it dries up seasonally. This time of year, there is usually quite a bit of water there, but the water level has fallen due to the lack of snow in the mountains in the winter, less precipitation this spring, and high, record-breaking temperatures.

Many species depend on the pond as a place to feed, rest, and raise their young. Those that depend on the pond have declined in numbers because of the loss of habitat conditions that they need. At this point, there is no water in the main section of the pond at all. We believe that it will probably remain that way until next spring.

From 2000 to 2001 certain birds have decreased in number. These species were very numerous last year.

The Red-winged Blackbird and the Violet-green Swallow are two examples. The Swallow flies around eating mosquitoes that have hatched from the mud. In the hot weather the mosquitoes don't hatch; therefore swallows have nothing to eat and the ecosystem cannot support as many of them. Now there are very few Red-winged Blackbirds and Violet-green Swallows living within the cattail marshes.

We figure that if the drought continues for a long period of time, there will be an even larger decrease next year. There is not much we can do to prevent these changes. It is all up to Mother Nature. If we continue to use Nature mapping to count the species in our area, then scientists can figure out what is going wrong besides weather and how to help.



Grass Widow by Katie Greer



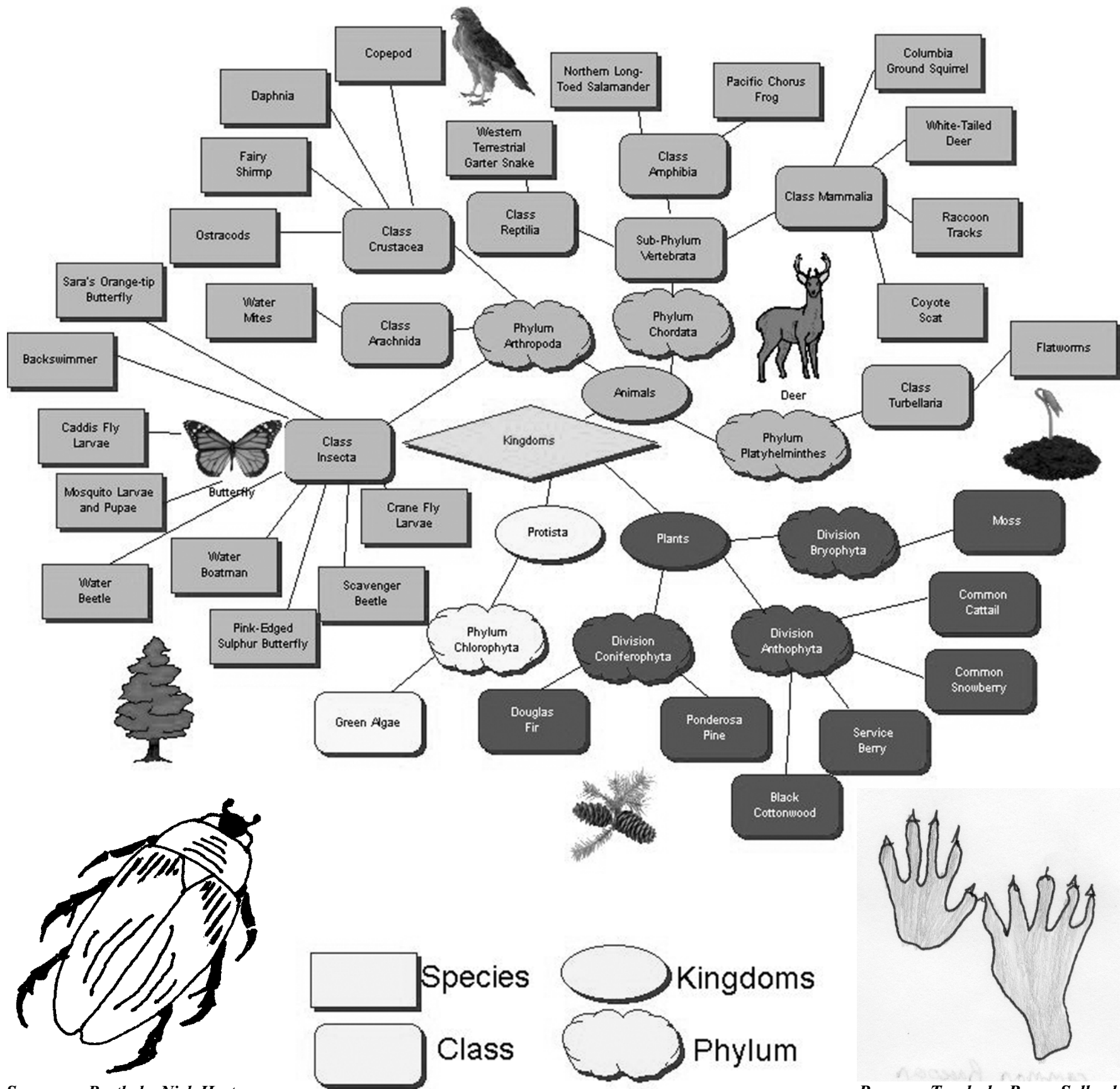
Pocket Gopher by Melissa Pieper



Western Terrestrial Garter Snake by Max Barnett

Diversity of Life at the Pond

By Kristyne Westermann and Shannon Camp



Scavenger Beetle by Nick Hartman

Raccoon Tracks by Bryan Solbach

Gates Grant

By Ashley Sellers

The Bill and Melinda Gates Foundation supports the Teacher Leadership Project. It's basically a statewide network of public and private teachers working together to integrate technology into the classroom. The goal is to provide technology as a tool for student learning and to see how students use it in reaching the Essential Academics Learning Requirement Benchmarks. Teachers are also studying the impact technology is having on students.

In May of 2000 our teacher, Mrs. Cassidy, was accepted to the Teacher Leadership Project. Since then she has attended a one-week course in the summer and several weekend seminars. Since May, we have received six additional computers, a scanner, a printer, and a digital camera. This added technology has definitely made a big impact on our class learning. For instance, we have a lot more hands-on projects. We have been able to take information about our community and put it into maps, graphs, and news articles. We have also been able to take pictures with the digital camera, so that all of our pictures are original and are of actual species in this area. The scanner and the printer have helped a lot as well because it makes things go faster, but still come out the best. For more information about the Teacher Leadership Project go to: <http://tlp.esd189.org/>

GIS????

By Nadia Yukrin & Roman Oberemok

GIS stands for "Geographic Information System." GIS maps are made on a computer, using ArcView GIS software. The maps can show the elevation, population, federal lands, population density, precipitation, farmlands, total population, rivers and streams, and a lot more. GIS helps you access and study information in the form of maps, tables, charts, and reports.

Road makers need GIS mapping to help them find the exact location of where a road is to be built. Ambulance workers use GIS maps to find where the patient is. So you can see how important GIS is in people's lives.

GIS helps you find answers to questions in the form of maps. It also can help you find answers to patterns, trends, and locations of anything that could go on a map. It can even show you where you live.

GIS also helps to keep track of animals and different species. By using GIS, Don Katnik, a wildlife researcher from Washington State University, keeps track of cougars and caribou. Don visited our classroom and told us about his research. By keeping track of the animals using GIS, Dan can tell if the animals are endangered.

This year, our class used ArcView GIS to make maps on our classroom computers. Tracy Grover, GIS specialist, came to help us. Each student made a map of our school. Students also found the location of their houses, elevation of our school and elevation of each of students' house, the distance between the students' houses and our school, and a lot more. The maps we made were fun and we learned a lot from doing them.

For more information on GIS, go to www.esri.com.

Technology

The GIS Experience

A provocative story about the uses of GIS in the field of ecology

By Yan Derkach and Seth Tyler

Picture yourself in the beautiful mountains of Pend Orielle County. The evergreen pines and firs reaching up towards heaven, threatening to disturb the peaceful ocean of blue sky watching over our realm of mortality. The sloping valleys cowering away from this immortal ocean. Then you look to your right and behold the beautiful herd of mountain caribou foraging for their evening meal, silhouetted against the golden sunset.

Seeing this picture in your head

would place you in the shoes of Don Katnik, only one of many people fighting to save this herd of mountain caribou living in the mountains of Pend Orielle County. Don and his colleagues have been trying to save these mountain caribou for years from predators and their biggest enemy—man.

These heroic people have an amazing ally in this impossible war—the GIS mapping system. This extraordinary mapping system could be the most valuable asset to these devoted scientists, besides a determination born of love for a species.

GIS maps help scientists in more ways than one. First, it helps map

the terrain that the herd of caribou lives on. After that, it helps map the herd itself. It also maps the territory of their worst predator in the area—the amazing, glorious cougars. Without the knowledge this program provides researchers would be in the dark. They wouldn't know when an animal died, or about the size of the herd (somewhere in the thirties). It also helps locate deceased herd members so that Scientists can travel to that spot and determine whether the animal died from predation or natural causes.

On April 19, Don Katnik and Misty Conrath came to our class to tell us about how GIS relates to their mountain caribou research. They showed us the maps they have made that show the home territory for many cougar and how it may affect the caribou. They explained the procedures that they sometimes go through, for example, in recovering a caribou body.

So as you gaze at the majestic mountain caribou, remember all the work put into helping these miracles of nature. But don't forget GIS and the importance of technology in the battle to save endangered species.

www.wa.gov/wdfw/wlm/research/caribou/trackboul/
http://nrsgis.wsu.edu/IMCTC/general_info.html

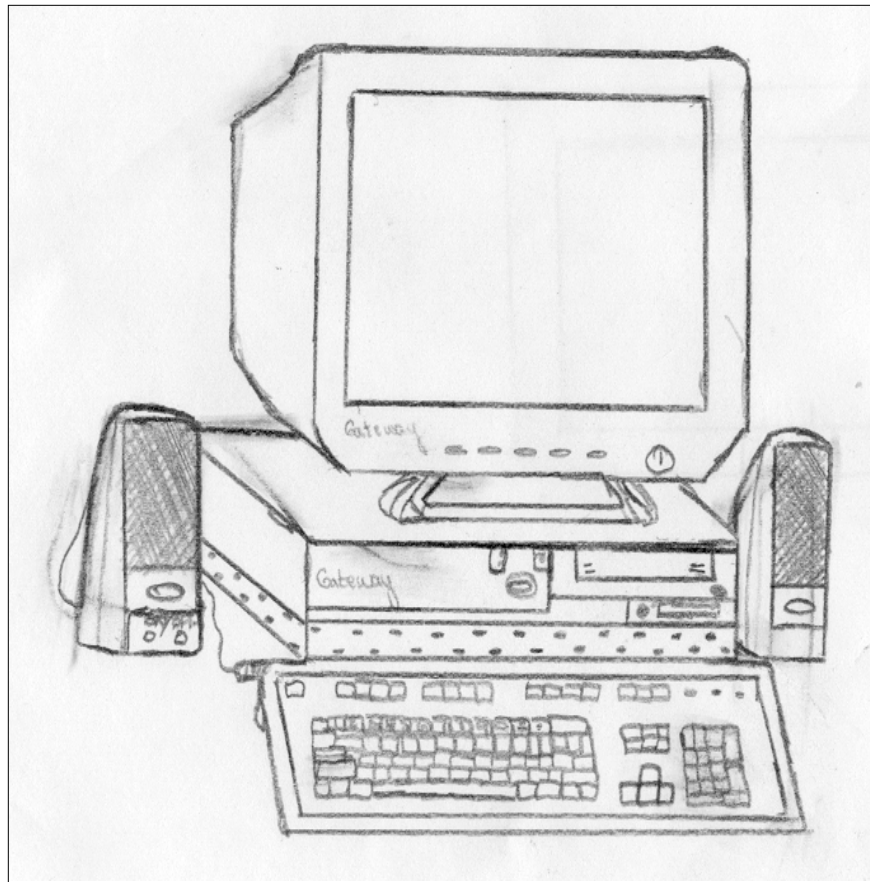


Illustration by Rudy Wegner

Our Programs

By Cody Waldroup

Recently, Mrs. Cassidy's classes at Chase Middle School have been studying and graphing the Glenrose Watershed area's animals and plants. We must first, though, learn many software programs. The following are the programs/equipment that we have been using:

Microsoft Word- The program that I am using now. This is used mostly for articles. "All of the options work well together." –Matt Richardson

Excel- Used to keep track of data on spreadsheets. Also, you may put your data into a graph on this program. "It's very versatile." –Stacey Cox

Inspiration- Used to make concept maps. These do not differ much from webs with their topic, sub-topic style of graphing data. My favorite! "It has a lot of really awesome graphics and options to work with. You learn something new that you can do on this program ever time you use it!" –Cody Waldroup (me)

Arcview GIS- Used to map the birds and animals that we find through actual mapping. "It allows me to be creative." –Tracy Grover

Photoshop- Used in conjunction with the digital camera to take pictures of the plants and animals we find. "I like it because it's the only program that works well... at least, for me." –Justin Burnett

PageMaker- A page layout program that we use to put the newspaper together. "The PageMaker program can do anything you want it to, and make any publication a good one" –Lauren Benson

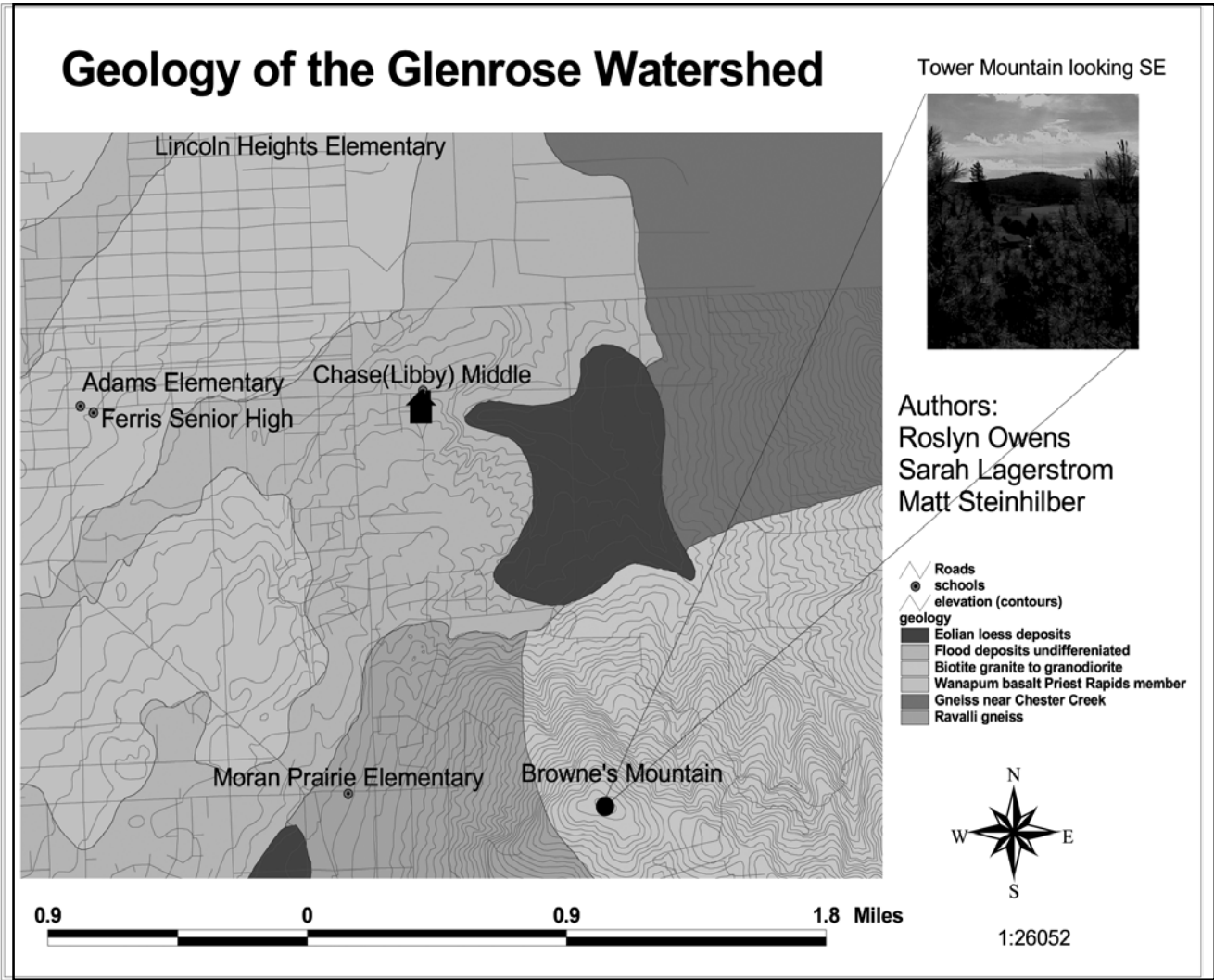
Time liner- Used to make a record of events that occurred in chronological order. "It is easy to use." Ryan Kirby

These programs have been learned, and used by almost every student in this classroom.

Newest Technology is OURS

By Branson Davis and Mark Wisdom

In the NatureMapping project that we did this year, we used a lot of newer technology. When we were outside NatureMapping we used a digital camera to take pictures of wildlife. We also scanned photos and drawings for our newspaper with a scanner. When individual people were working on their projects they used new Gateway computers to type and edit. To put the newspaper together we used a brand new Gateway and Adobe PageMaker. On the computers we used many different programs including Inspiration, Timeliner, Microsoft Word, Adobe PhotoShop, Microsoft Excel, Microsoft Publisher and the GIS program, Arcview 3.2. Branson and I were the Technology Assistants for our period. We helped people with their computer problems and edited photos and set up computers and equipment.



Hi-Tech Mapping with Arcview GIS

By Roslyn Owens and Sarah Lagerstrom

A GIS map shows a great deal of information about an area. It can show geology, elevation, schools, hydrology, and roads. Our map shows the geology and elevation of the Glenrose Watershed and the South Hill. The closer the lines are together the steeper the slope. The geology is shown with shades of gray. The map shows a great variety of geological deposits in the Glenrose watershed.

Sound Pollution in the Glenrose Watershed

By Jeremy Walmsley and Brendan Jacquemin

In Mrs. Cassidy's class we learned about the evils of sound pollution. Sound pollution is more important than you think; especially in the bowl shaped Glenrose water shed area. All the sounds in the Glenrose area are reflected off of the mountains. Most of the problems come from dirt bikes and other off- road vehicles. The main thing that sound pollution does is scare away animals, which can even ruin habitats.

Now there are only twenty-three national parks that allow off-road vehicles. Off-road vehicles rip trees and wildflowers from the hillsides and pollute mountain streams with muddy runoff.

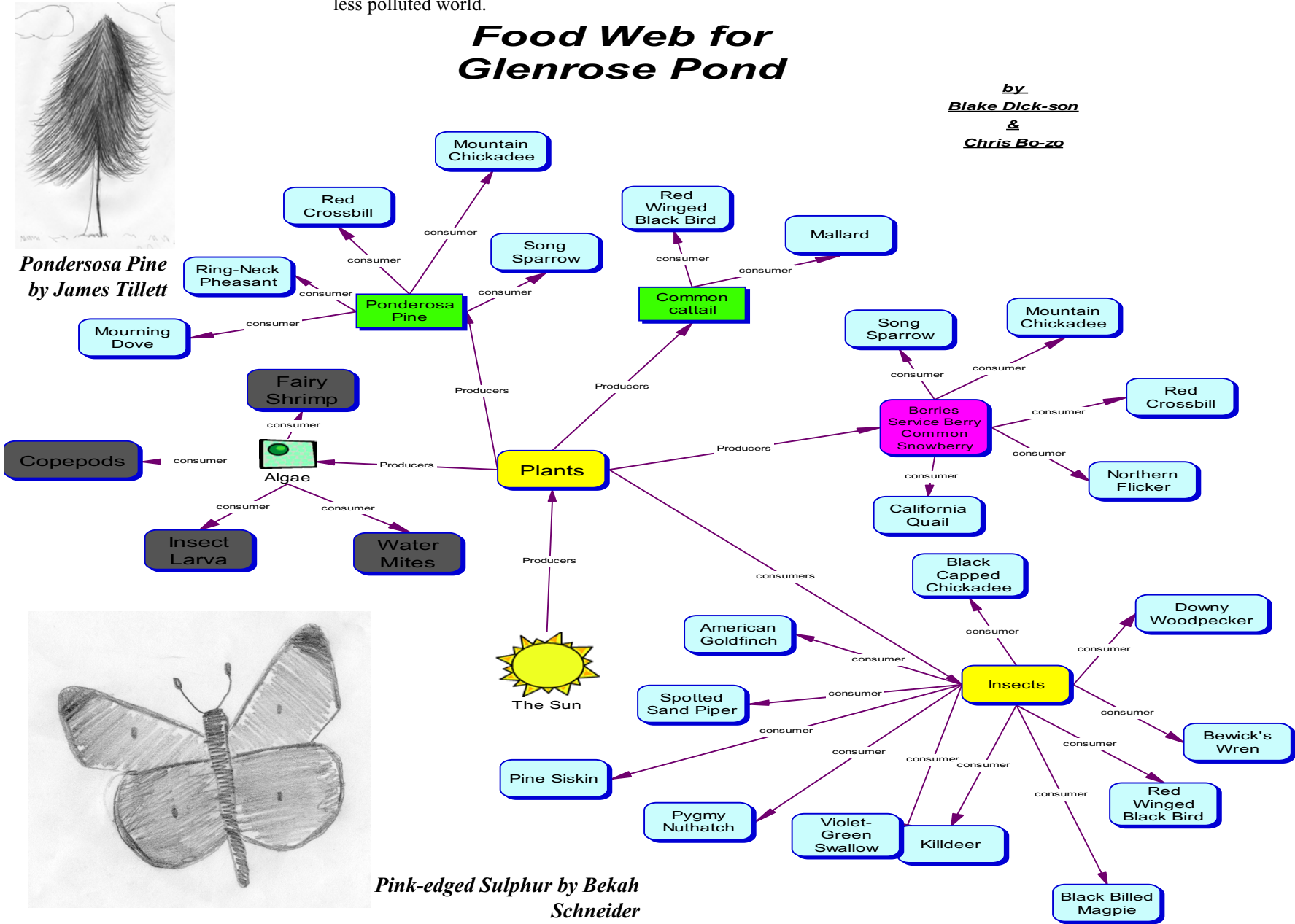
We encourage you to take this into consideration and don't drive off-road vehicles in the Glenrose area. Thank you for you time and consideration. Continue the fight for a less polluted world.



Don Katnik and Misty Conrath, WSU Caribou Researchers

Food Web for Glenrose Pond

by
Blake Dick-son
&
Chris Bo-zo



People Who Helped Mrs. Thorson



Jan Reynolds was a constant volunteer in our classroom

Jan Reynolds

By Ashley Sellers and Stacey Cox

For the past four years at Chase Middle School, Jan Reynolds has been visiting science classes to teach students about Nature Mapping. Before coming to Chase, Jan worked with many other schools, most of which were elementary schools. Jan said that she enjoyed working with the older kids and grew fond of their enthusiasm and excitement towards Nature Mapping.

Most people are unfamiliar with the Nature Mapping program that we use here at Chase. Jan Reynolds can explain it perfectly. She says that it makes you more aware of your surroundings and gives you a better understanding of how delicate and reliant your environment can be. Most

importantly, Nature Mapping is an organized way to record certain habitats and the changes they have gone through over time. For the students and Jan, Nature Mapping was a fun way to go outside and have fun while researching an important subject.

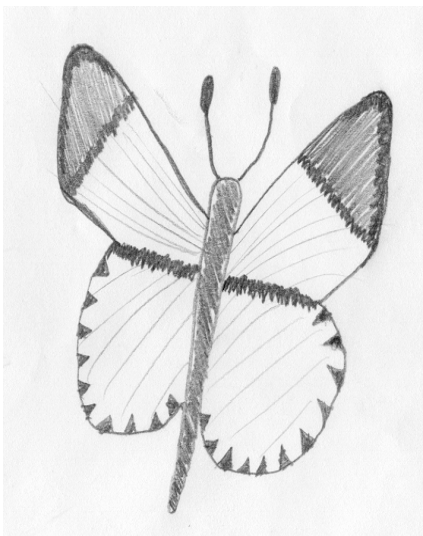
All of Jan Reynolds' visits to Chase Middle School have been greatly appreciated by the students and teachers. Everyone learned new facts about the environment around our school. Thank you very much, Jan for teaching everyone at Chase your knowledge on Nature Mapping, and we hope that you come back soon.

Mr. Bucholz

By Erin Almquist

One of the many people that have helped Mrs. Cassidy's classes go on field trips, is Mr. Vern Bucholz. Mr. Bucholz is an E.S.L. tutor, which is short for English as a Second Language. His duty is to help all E.S.L. students, but he helps with our class as well. Mr. Bucholz's favorite thing is to go out to the pond with the class and see all the changes since the last time he visited the pond. He has noticed many things such as the difference in water level, different animal tracks, and even different plants that might have grown since last time we visited the pond.

All in all, Mr. Bucholz has helped Mrs. Cassidy's class in many ways. Thank You Mr. Bucholz



Mrs. Kaplan

By Shannon Camp

There is no way that our class could complete a project as great as the Naturemapping assignment without the help of adult volunteers. One volunteer that spent a lot of time at Chase helping with the project was Carol Kaplan. Ms. Kaplan took time out of her busy schedule on several occasions, to travel to the pond at 29th and Havana with students from Ms. Cassidy's classes. When asked why she chose to be involved with the Naturemapping project she said, "I enjoy being out in nature and wanted to compare the Glenrose habitat with the West Plains habitat in which I live." She chose a great year to be involved with the project because due to the weather and student participation the mapping was successful. Ms. Kaplan thought the project went "great!" She said that she loved seeing the reaction of the students when they saw a new bird or animal. The project was not only successful because there were a lot of animals spotted, but according to Ms. Kaplan it was successful "Because the students really started to realize how fragile a habitat can be." Thanks to adult volunteers such as Carol Kaplan the 2001 Naturemapping project went smoothly.

*Sara's Orange Tip Butterfly by
Bekah Schneider*

By: Ashley Sellers

I did a short interview with Mrs. Janice Thorson. She has been a helper in our class for most of the year. This is some background information on her and what she thinks of the Glenrose Gazette.

What made you decide to come help with our class?

I've known Mrs. Cassidy through environmental classes and found out she was a neighbor of mine, so when I retired from teaching and wanted to volunteer, this seemed like the perfect place to come.

Where were you teaching before you came here?

I taught for eighteen years in Bellevue, Washington and over the last twelve years I taught at Pratt Elementary.

Do you think the Glenrose Gazette is important to our community and why?

I think it is important for a couple of reasons. First it shows how talented the Chase students are, and the topics you cover are of great interest to the community.

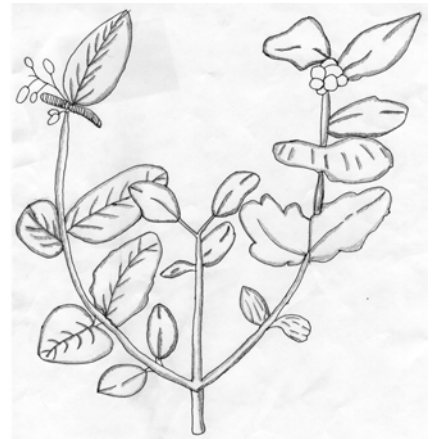
Big Thanks to Tracy Grover

By: Katie Bray and Yelena Korovina

Tracy Grover has been a very important part to our NatureMapping this past spring. Ms. Grover has come in multiple times to teach and assist us with our GIS Maps. She has been very helpful and we appreciate the time she has spent in Mrs. Cassidy's classroom.

Ms. Grover is a specialist in geology and this is her fourth year teaching, now at Spokane Falls Community College. She is a former teacher at EWU and WSU as well. She focuses on teaching students about geology and Geographic Information Systems. She also works with the U.S. Geological Survey creating GIS data.

Ms. Grover has been visiting schools for the last three years to educate younger students. GIS Maps are interesting to Ms. Grover because she can use color and creativity while analyzing scientific information. Ms. Grover stated that computers are very helpful. They offer a much faster and easier way to do the maps instead of



Snowberry by Dima Zheltkov

drawing them out by hand. With the computers you can access information from all over the world and you don't have to redraw the map each time you need to make changes. Ms. Grover says that it is important to come into classrooms and teach students about the Arcview program and about GIS Mapping. This is a new tool, that isn't in most classrooms. We are very lucky and are one of the few classrooms nationwide that a teacher incorporates GIS into the curriculum.



Arrow-Leaf Balsam Root drawn by Allison Wiks