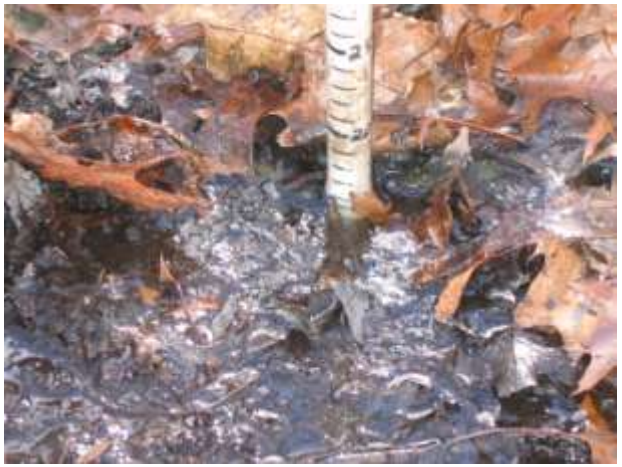
Vernal Pool

Class of 2008-2009

What is a vernal pool?

- A vernal pool is a habitat for many animals. A vernal pool dries out in the summer so fish can't live there. Vernal means spring. The spring snowmelt fills the vernal pool. Vernal pools are delicate ecosystems.
- Emma Formosi



Sometimes there's water, and sometimes not

- Sometimes there is water in the vernal pool and sometimes there isn't. It does not have a stream connecting to it, so mostly there is no water in the summer. When the pool has ice on it the ice melts and makes water. So,that's when we have the most water.

Nick Arcadipane

When we first went out

- When we first went out to the vernal pool it was a dump we couldn't even see the water. It was covered with dirt and sticks. There was a bucket, a bike, trash etc. We cleaned all that stuff out and now it is a clean safe environment for animals to live. Now when we go out it looks totally different. We can even see the water.

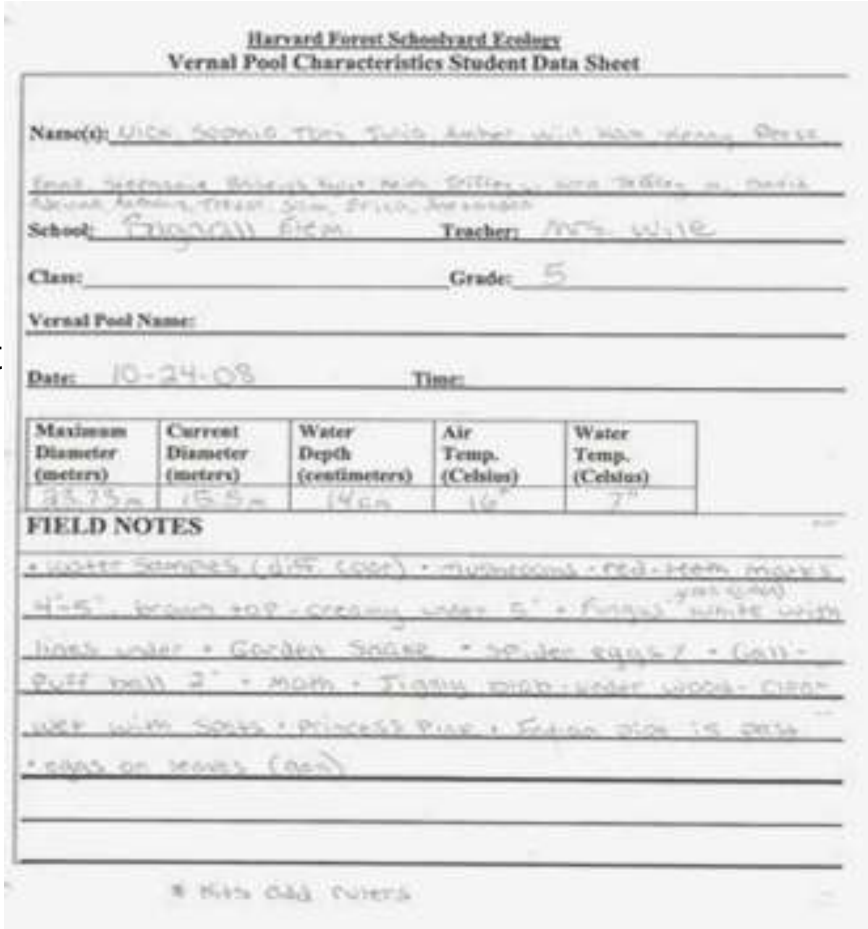
- Baileigh Henderson

LTER DATA

Long Term Ecological Research

Our 5th grade class is collecting data for the Harvard Forest long term ecological research schoolyard project. When we go to the vernal pool almost every month we collect data for Harvard Forest so they can learn more about vernal pools. By helping Harvard Forest learn more about vernal pools it has also taught us all about the environment. We use the data sheet to the right to record the data at the vernal pool such as: maximum diameter, current diameter, water depth, air temperature, and the water temperature. Then we take notes on what we have observed.

Amber Demers



Harvard Forest Schoolyard Ecology

Vernal Pool Characteristics Student Data Sheet

Name(s):

School: Teacher:

Class: Grade: 5

Vernal Pool Name:

Date: 10-24-08 Time:

Maximum Diameter (meters)	Current Diameter (meters)	Water Depth (centimeters)	Air Temp. (Celsius)	Water Temp. (Celsius)
33.75m	15.5m	14cm	16°	7°

FIELD NOTES

Gathering vernal pool data

The picture at the lower left shows us checking the water temperature in degrees Celsius. We also take the air temperature, diameter, max diameter, current diameter, and the depth as shown in the picture to the right. In the late winter we had a hard time checking the depth of the vernal pool because the snow fall covers the pole we have to check the depth but with the help of binoculars we were able to get it.

Kylie Kennedy

Observations

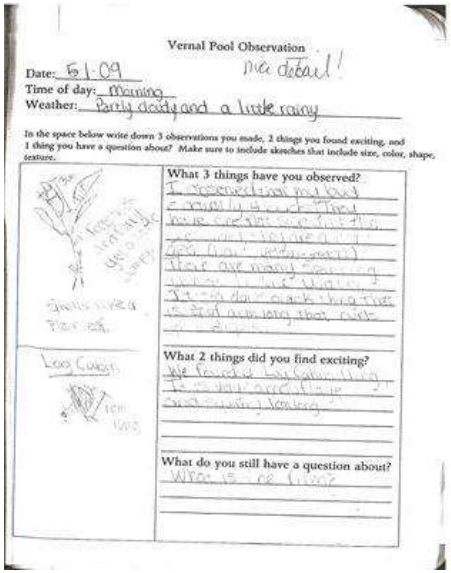
We have made many observations by using the 3.2.1 Chart. Here you can see me, my teacher, and a person From my group observing something. The 3.2.1 chart asks things like 3 things you thought were interesting, 2 things you found exciting, and 1 question. There are Other things like the chart at the top is where you record data like water samples, temperature, diameter, and width. That is why observations are very interesting.

Jeffrey Legere

Deep Descriptions

It is important that when recording information about an ecosystem (like the vernal pool) that you go into great detail. For example, instead of saying "The frog is brown", you could say "The wood frog is a bark-colored" and draw a labeled sketch. If a sketch is detailed and labeled, then next time you go out you can tell if you see the same thing. If you're studying the same plant or tree bud ,like we did, a specific sketch would be worthwhile. Also, describing the bud with words, going into full detail, is a really great thing to do. So remember, describe and sketch well when studying an ecosystem.

Sophie Capobianco



Vernal Pool Observation

nice detail!

Date: 5/1/09

Time of day: Morning

Weather: Partly cloudy and a little rainy

In the space below write down 3 observations you made, 2 things you found exciting, and 1 thing you have a question about? Make sure to include sketches that include size, color, shape, texture.

What 3 things have you observed?

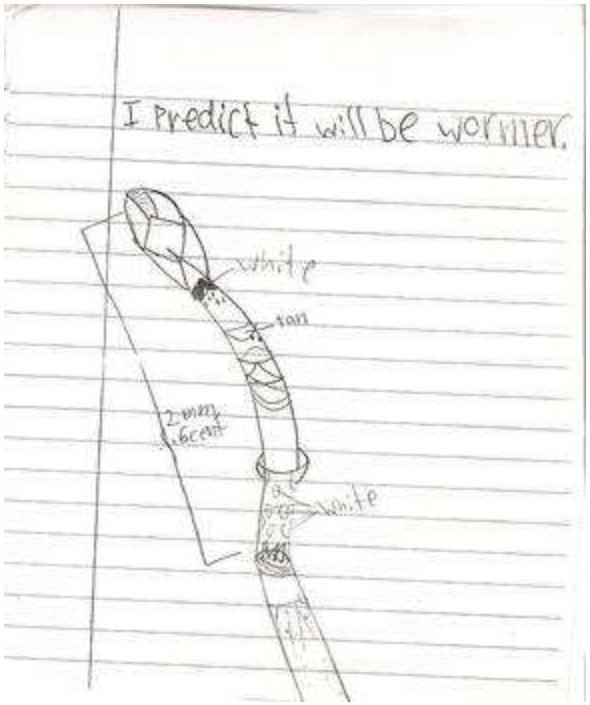
What 2 things did you find exciting?

What do you still have a question about?

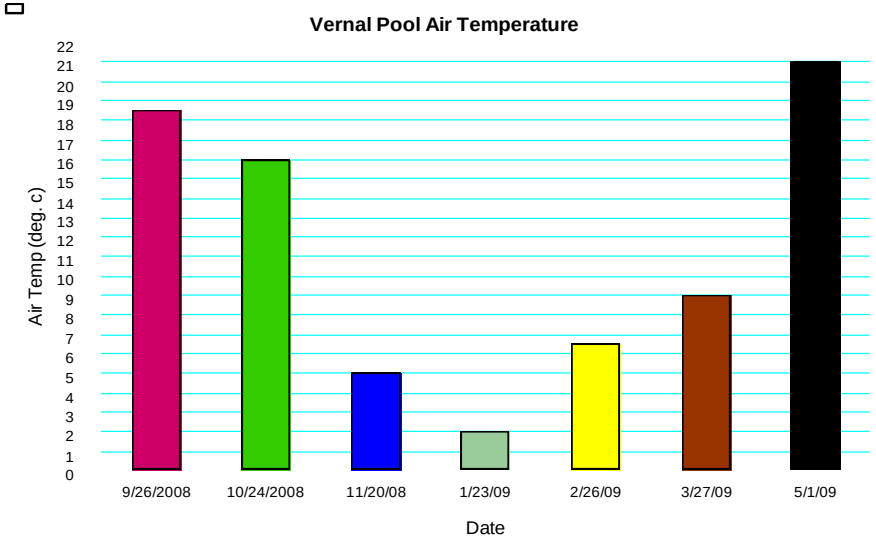
Important Sketches

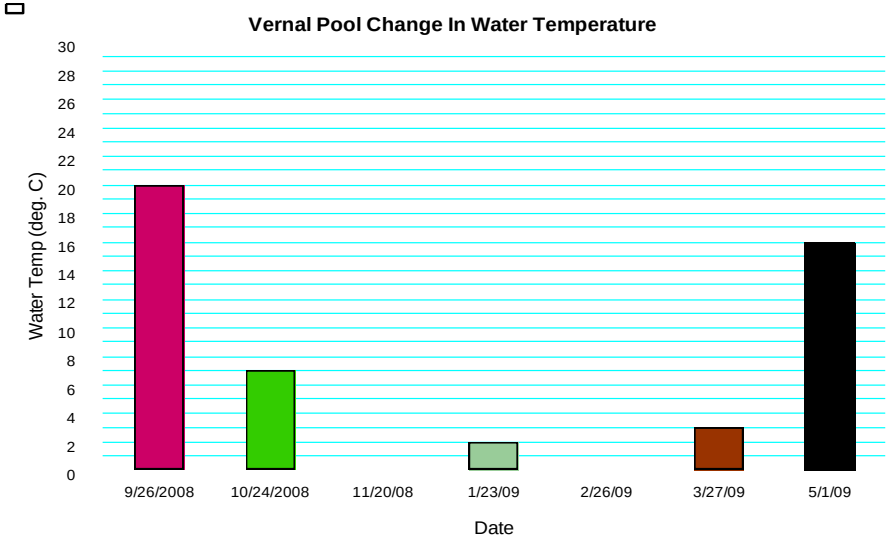
Drawing sketches was very important. While out in the Vernal Pool we had to act like scientists. Scientists draw neat, labeled, description filled drawings. These would help us look at things without bringing them to our classroom. In our sketches we have to describe the color, it's name, texture, size and shape. The picture to the right includes all of these things. Drawing sketches was a very important part of studying the Vernal Pool.

Erica Warner



TEMPERATURE CHANGES





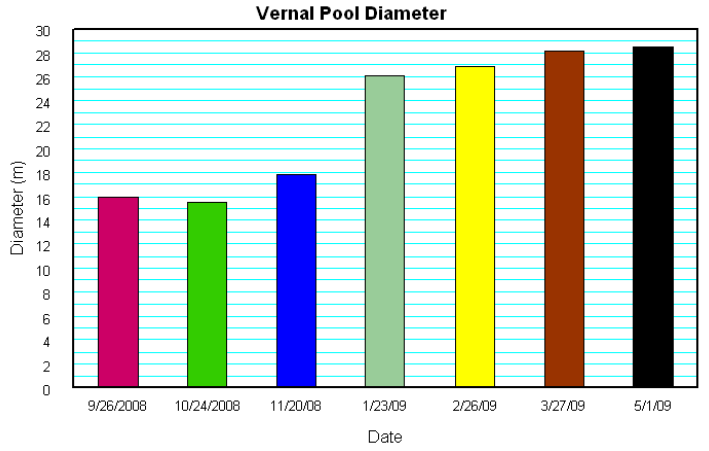
We noticed that in January the water temp. rose 2 degrees but the air temp. went down. I think it may be because of missing a month of data. Maybe it was because the water was frozen over and kept warm. Also, the highest temp for water was in September but the air was warmest in May.

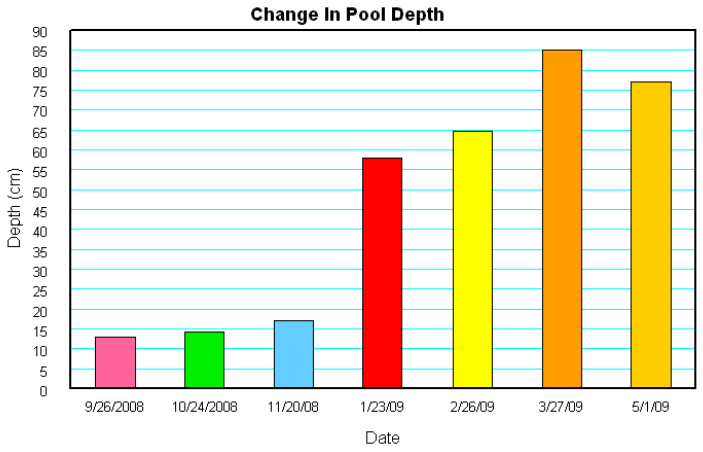
Kenny Drelich

Change in Pool Depth and Diameter

- The pool's depth and diameter both started out small and then got larger but now the depth and the diameter are both starting to drop because the temp. is getting hotter. The prediction I have is the depth and diameter will go down even more because it is getting hotter because it is close to the summer and it is getting sunnier also because the trees are sucking up the water.

- Jeffrey Modlish





The plants and animals in an ecosystem

Plants and animals in an ecosystem are very important. Without the plants and animals the oxygen would be affected making it hard for animals to live. And, without animals the plants would eventually die off because nothing would be reproducing.

Reese Dwyer

Cool Creatures

When we went to the Vernal Pool, we found many different creatures. When we went to the pool in September and October, we found bullfrogs, tree frogs, jumping spiders, and inchworms. In the winter months we found few different life forms. In the spring months we found more frogs, caddisfly larvae, and pesky mosquitoes!

Kamren Donovan

Challenges In The Winter

We had many challenges in the winter like breaking through the ice. We broke through the ice to collect the water temperature, the water sample, and depth. When we went out later in winter we could not break through even with an auger and hammer. These where our winter challenges .

Stephanie Gleason

Macro invertebrates

- One time at the Vernal pool each group took a small net, got a small sample of pool water, and then poured it into a white pan to see what *Macro invertebrates* we could find.
- Macro invertebrates are living creatures that can be seen with the human eye.
- Once we were done getting all our water samples we looked very carefully to find some living organisms like fairy shrimp, caddisflys, and many other macro invertebrates.

Will Dickson

Endangered Species

- *The picture on the top is an endangered plant called an Indian pipe. An Indian pipe is an endangered flower that is so small people don't know it is there and kill it. The flower on the bottom is a lady slipper. This is endangered because it so delicate.*
- Trevor Snow

COOL CRITTERS!

- During spring all animals from the vernal pool return to lay their eggs after a long harsh winter.
- When they migrate it's called the big night.
- There are hundreds of species like frogs and this creepy critter called the Log Cabin Caddis fly (in the picture to the upper right). You never know what could be crawling your way!
- By: Keith Kowalick

*Things in the Spring*

The spring life in the vernal pool is very extraordinary! Amazing animals include amphibians, and mammals. Did you know that "vernal" means spring? Well, the reason these amazing pools are called "vernal" pools, is because they have water in them is in the spring time. During the other seasons, these pools oftendry up completely. Since the pools dry up, fish can't live there. However, there are some amazing plants in the spring time! Plants like Lady Slippers, Indian Pipes, and lots more!

-Victoria Carnes

What we learned

- As we have been going out to the vernal pool we have learned some things. One thing we have learned is to be quiet so we can listen to bird songs. We have also learned not to step near the edge in the spring time. This is important because in the spring time animals and insects lay their eggs near the edge. You could step on them! We have learned how to track data down on a piece of paper. This is very important because now when we go out to the vernal pool we can see the differences that have happened between the months. Out at the vernal pool we have six different groups. Each group has learned to work together as a team. We all help each other by getting water samples or even help track the data down. We work together great! This vernal pool has helped us learn us a lot !
- Julia Dehullu

HUMAN IMPACT

When we first went out to our vernal pool, there was garbage EVERYWHERE! There were buckets, moldy ladders, bottles, building material, a bicycle, etc. We took all the junk out so the creatures living in it could have a good home. Now, the vernal pool is a nice, clean environment. It would help if people didn't trash ANY vernal pool. It is a part of nature, not a garbage dump.

Adriana Santos

Exciting sites!!!!

Some exciting sites we have seen are a huge bull frog, a baby salamander, a group of eggs, lady slipper, Indian pipe, and we also found turkey tail fungus. The first bull frog we found was in September. It had to have been at least 5 inches. When we found the fungus it was all over a stump. It really did look like a turkey tail, it was a cream color. When we found the baby salamander it was on June 15th. It had these gills that were fluffy, it was about a inch to a half an inch. The lady slipper is a pink flower that hangs from it's stem. The Indian pipe looks like a little white pipe. Finding these animals and plants were really exciting.

Alex White

Frogs

Frogs are very important to an ecosystem. If there were not frogs, insects would all multiply very fast. Say there could be one insect that eats a very important type of plant. If the frogs are the only thing that eats the insect, they need to be there to control the population. Otherwise the insect eats the plants until they are all gone, then the insect will die for lack of food. So having the frog keeps everything in balance. There are a lot of different types of frogs. The three most common types you could find in a vernal pool are a wood frog, tree frog, and a bull frog. Frogs are very important to a ecosystem.

By. Sam Steele

The Last Visit

- *On the last visit to the vernal pool we made our observations, and described what we saw. We dipped the white little bins in the water, and recorded the animals.*
- *Finally we said good-bye and took our last look (as a group) at the vernal pool. We put the critters back in their home…the vernal pool.*

By: Kara Linck

A great year of learning about the environment!!