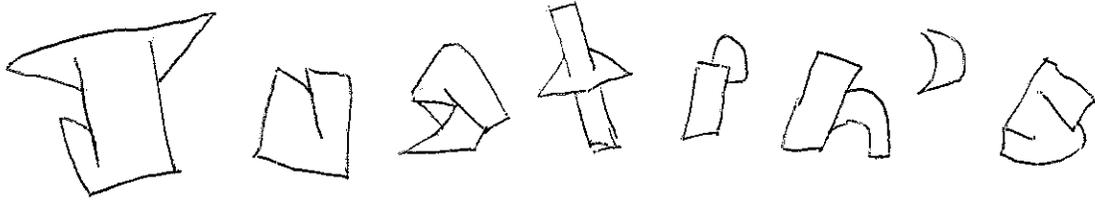
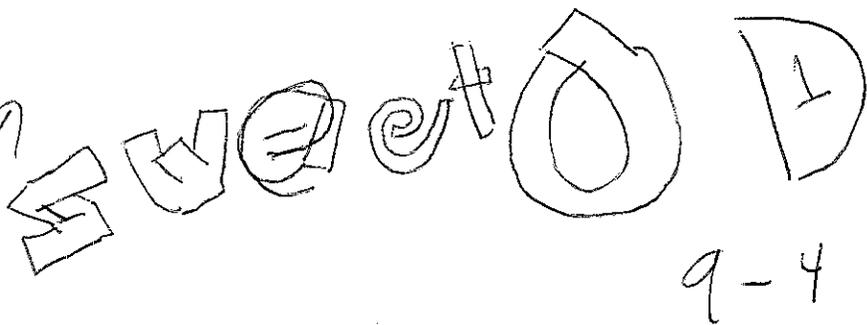


July 18, 2006



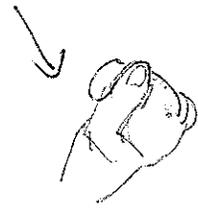
Leaders
 Justin "It's-a
 My OD!" Cheeverst
 Jon "I'm just
 old" Rivnay,
 617-965-6378
 and
 617-645-1379
 respectively



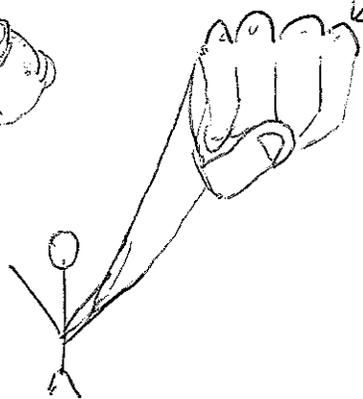
Today we will ... make up our own crazy font like above. No, we will not be doing that because mine turned out bad, Oh well I guess we'll just have to go to a golf to see the effects of building golf courses on the environment. I've done my research. I promise. After this OP, you will be ready to take on the world with your double-pumpin' FISTS OF KNOWLEDGE.

- Bring:
- Water
 - Boots
 - Lunch
 - Daypack
 - Sunscreen
 - Bugspray
 - Notepad
 - Raincoat

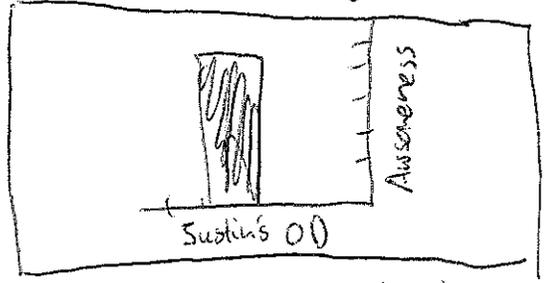
a fist of knowledge



a better drawn fist of knowledge.



Scientific Graph



~~At~~ In case of emergency, your child will be brought to: Newton Wellesley Hospital at 617-243-6000. This program comply with the MA Dept of Health's regulations and ~~be~~ be licensed by the city of Newton Health Dept.

CHRISTOWN DESIGN

At Almony Woods and Hall's Pond Sanctuaries

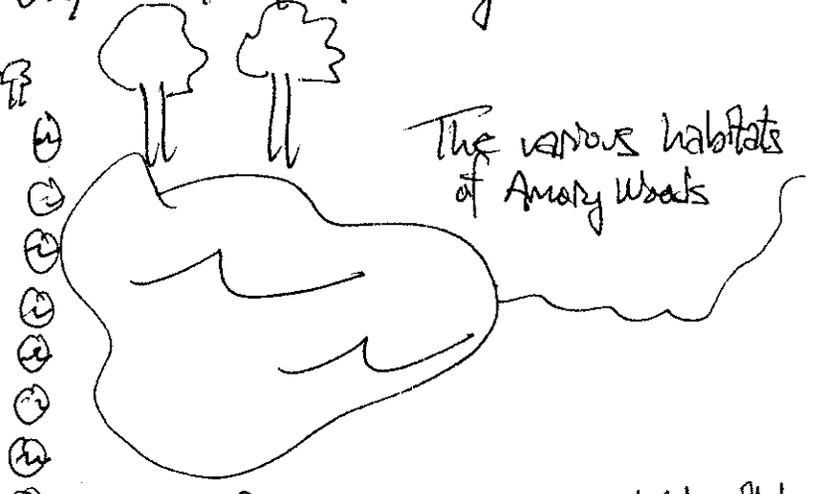
Get your hiking boots on and get a good night's rest because come Monday we're got a long hike on tap. Yes that's right, we're going to be walking to Brookline to see the only park in Brookline. And oh what a park it is! In the space that the place is in contains three very diverse natural habitats - a wetland basin, a wooded upland and a natural field area. By the way, upland is just a fancy way of saying an elevated land.

Interestingly enough, much of the streets around the area was once wetlands back in the 17th century - Oh, how the times change!



The Important Information

- Where: Brown
- When: 9-4
- Leaders: Chris Leo Palemino (617) 260-319
Lynda Kordchuk (617) 558-5567
- Equipment: Hiking Boots, A LOT (2+ liters)
(water) Big lunch, Field Kit (Ranger/First Aid),
Some cash

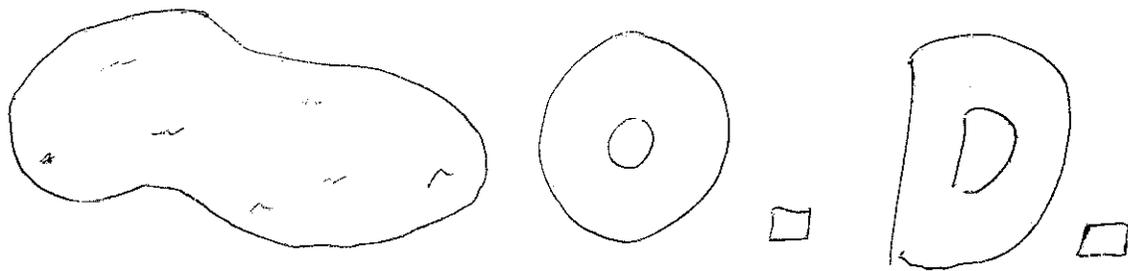


- ⊙ In case of an emergency, your child will be brought to Newton Wellesley Hospital 617 243-6000
- ⊙ This program must comply with the regulations of the Massachusetts Department of Environmental Affairs

Arin's

pH?

Alkalinity?



Leaders:

Arin Hunter-Schlörhottz

617-928-3457

Lydia Kovalchuk

617-558-5567

Equipment:

Water, Lunch, Daypack,
Hiking Boots, raingear,
sunscreen

We will be traveling to Crystal Lake to test the water at different points on the lake and learn about pH and alkalinity levels and what they mean for a body of water and the things in it (that includes us humans) and what acceptable levels of pH and alkalinity are in a body of water of that size compared to a smaller one like a pool.

In case of Emergency, your child will be brought to:
Newton Wellesley Hospital: 617-243-6000.
This program must comply with the regulations of the Massachusetts Dept. of Public Health and must be licensed by the City of Newton Health Department.

JON'S OWN DeSIGN

Collectable Tripslip #1 of 1
Collect all 1 and win!

Tripslip # 12

When:

9am - 3pm
July 19, 2000

Where:

Brown Middle School

Leaders:

Jonathan Rivnay
527-1849
Angela Simunovic
527-7993

Equipment:

Hiking Boots, Mucho Agua
(Lots of Water), Big Lunch,
Field Kit (Raingear, First
Aid, etc.), Bug Spray,
Sunscreen;
3 9-volt batteries and your
thinking caps.

Weather Forecast
by boston.com for:

Wednesday
July 19, 2000



Partly Cloudy
High 77 / Low 62

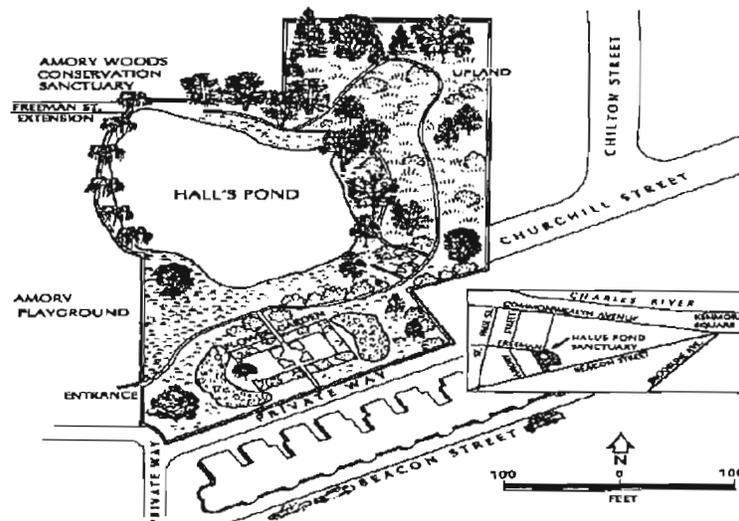
Mostly sunny skies with some afternoon fair-weather clouds popping up. Highs in the middle to upper 70s. Partly cloudy to mostly clear skies at night. Lows in the lower 60s in the city, 50s in the suburbs.

EnviSci takes no responsibility for the accuracy of the boston.com weather forecast. You must bring your raingear and lots of water, no matter what!

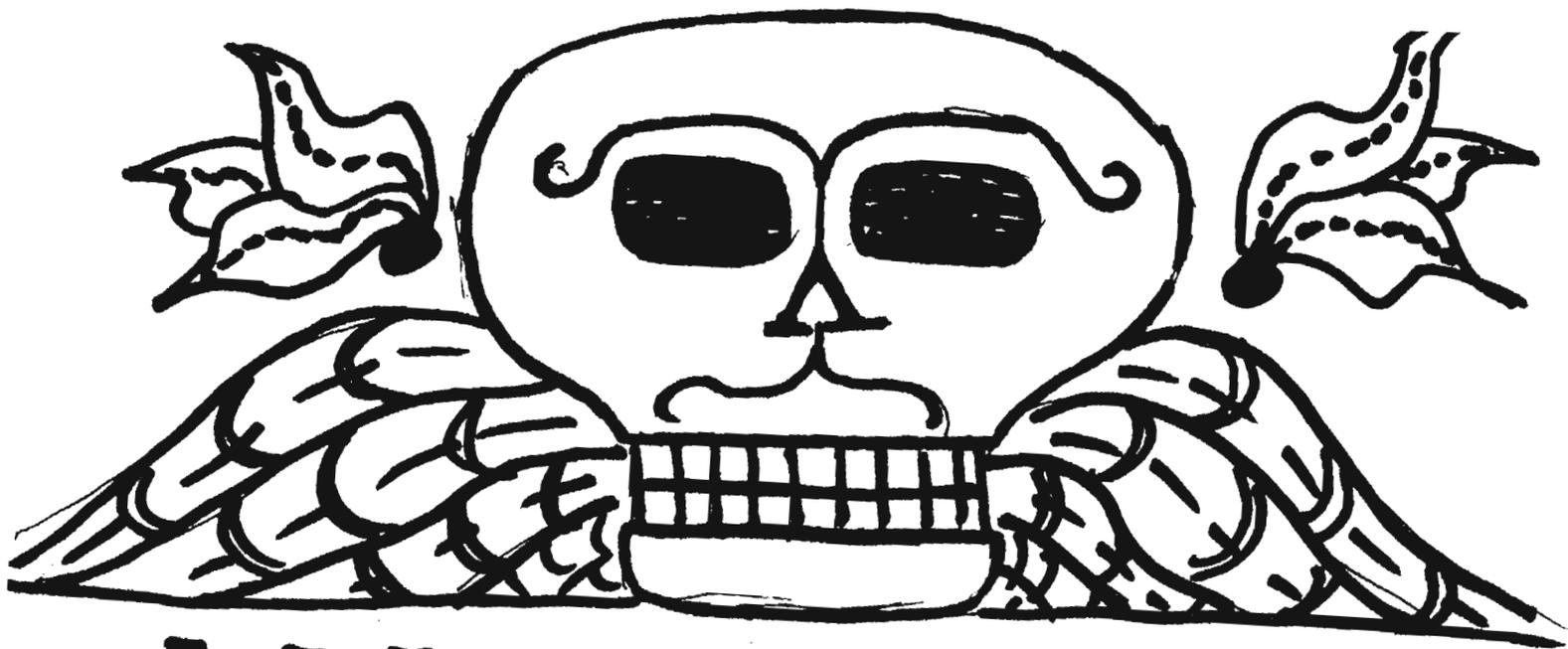
Very good then, so...I'm sure all of you are very excited to find out what my OD is...well, if you thought it was going to be a really short biking trip, you were dead WRONG!, because it is going to be a really long walking trip. Yes, I said walking trip. Today we are going to the northern part of Brookline, yes, Brookline, as in where Danny is from.

Yes...we are going to: the one...the only (I think)...**Amory Woods, and Hall's Pond Sanctuaries!** Yes, You heard me right...Amory Woods and Hall's Pond Sanctuaries! This place is quite special because it is a very small reservation that exists in an urban setting, we will discuss how its busy surroundings have an effect on the Sanctuaries.

The whole area that surrounds Amory Woods and Hall's Pond was once (long ago) called Cedar Swamp, and these small reservations are all that is left of it. Yet it still contains three very distinct natural habitats, including a wetland basin, a wooded upland, and a natural field area.



HALL'S POND SANCTUARY



MADDIE'S

9:00AM BROWN

JULY 15

Please bring:

boots, lunch, lots of water, and raingear.

The East Parish Burying Ground was founded in 1660. It was the only grave yard in the area for 120 years and contains settlers that lived before the Revolutionary War. Because the graveyard is so old, it is really cool. We will be walking there and exploring. Don't forget, at least 2 liters of water, see you tomorrow!



Jeff D, the red-headed one.

AN exploration of food webs, ecosystems, and some SUPER cool predator-prey relationships

Equipment needed

- Field kit
- Lunch
- 2 liters of water
- A 2-Liter Cola bottle (EMPTY)

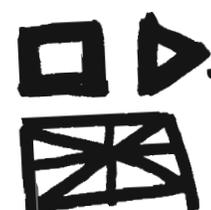
This is about all I should say, because OD's are usually unnecessarily secretive. At least mine is this time. But for your comfort this is a fun & games trip, not a walking trip, so hiking boots aren't essential. For questions or comments, call:

Meet @ Brown, 9-4, and get lots of sleep

Jeff DeCaw
964-7845
Jeff flamemurder

DAVID Krin S Kys

Location: Brown
Time: 9-4



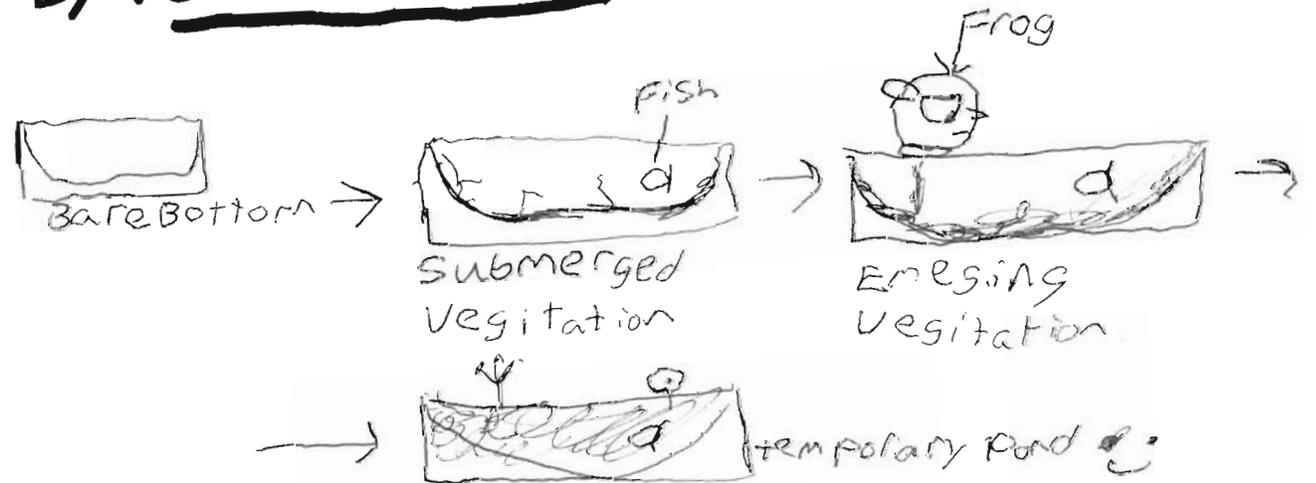
Mike Mclellan
617-244-8836

David Krinsky
617-332-4459
PAWK

- YOU NEED
- 2L of water
- Daypack
- lunch
- hiking boots
- *notebook
- *pencil



For my OD... we are going to cutler (pause for gasp)! It is located in Needham. The marsh lands were created by flooding from the newton UPPER falls dam. The marsh was formed by Pond Succession. Here is a POND Succession



LEADERS:

Sarina Yospin
(969-3966)
and
Danny Yagoda
(738-0269)

TRIPSLIP #3
7-3-02
9am - 4pm
Meet @ Brown

TIE-DYE

MANIA!

Equipment:

Lunch, water,
boots, field kit,

AND

• A Blank white
100% cotton T-shirt
or socks or
underwear. It's a
free country.

• Wear grungy clothes.
• FABRIC MARKERS IF YOU'VE GOT 'EM

Interested in the world of high fashion? Well, neither are we. But this is gonna be cool! So bust out your Grateful Dead records and prepare yourselves for TIE DYE MANIA!

Today, we will use the fruits of the earth to naturally dye some T-shirts and such. We'll use all sorts of materials:



AND MORE!

Also, we can write/draw environmentally conscious things on our naturally dyed clothing. Get ready for a good time, the ESP way!



SUBLIMINAL MESSAGE: BRING TASTY SNACKS AND/OR LAVISH GIFTS FOR YOUR LEADERS

Leaders: Jesse Sayles (965-2719)
Sarina Yospin (969-9366)

TRIPSLIP # 11

July 18th, 2000

Times: 8:30am – 3:30pm

Location: Brown middle school

Jesse's o.d: Pagan Hill Reservation

Equipment: backpack, lunch, WATER (two quarts), Field kit, sneakers, bike, HELMET, bike tools if you have any, a well-rested mind and body

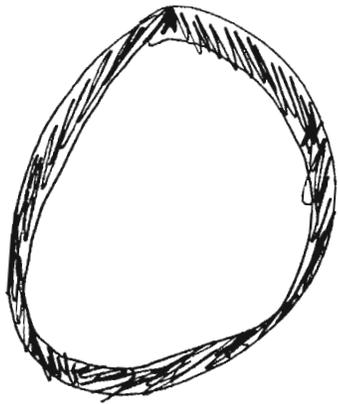
"Jesse, what happened? You look like E.colli, the bacteria that lives in large intestines, testing smells" inquires Jenny with concern.

Jesse answers rather lethargically, "I went out to Pagan Hill Reservation to scout my O.D. I already knew the history, but I needed to check the place out. I knew how on top of this drumland, an asymmetrically sloped mound of dirt formed by a glacier, which is covered in pine oak forest, is the house of Thomas Pagan, one of the Reverend John Eliot's "praying Indians" I was also aware that you could see the blue hills from the top of the Reservation. But I needed to check things out. So I'm walking through the woods, and all is tranquil, but I soon learned that this was simply a clever illusion so I might drop my guard. After a while I could feel the serenity that was in the air fade, and I could hear the spirits of the wood buzzing around my head, and then, BAM, they would stab at me with there spears" explodes Jesse, with passion in is voice. "The only escape was to try and out run them, and run I did. The spirits in the air knew I was faster than they, so they summoned help from those that live in the ground. This aid came from those spirits that live in a mutual symbiosis in the root nodes of the tree roots. The spirits receive shelter, and the tree receives protection. So I'm running as fast as I can, when suddenly up from the earth springs forth a knurled woody hand, grabbing my foot sending me crashing to the forest floor. I get up, my hands, knees and elbows stinging, dripping with a dark mixture of blood and humus, that organically rich sediment on the floor of temperate diciduse forest maid up primarily of decaying leaves. Well I fortunately maid it out of the wood just as the sun was setting, for I knew I would not have if I remand in the wood for the slumber of the traveling lamp. I never found the house, or the top of Pagan Hill. All the trails lad to nowhere yet everywhere. Hopefully, my students can break the enigma that is the wood of Pagan Hill Reservation.

Times:
9-2

MIKES

Equipment:
Field kit
H₂O, Lunch,
sesame seeds,
and a towel.



7/17/00

Michael DIEN
244-0285

Sarina Yospin
969-3966

Today we will be traveling to the Heath Woods. These little known woods are nestled behind, or near the Atrium mall. There we are going to learn about how man, as in the human race, has cut back nature to a point of confinement in some areas.



Can you imagine what Newton looked like before it was Newton? I mean before people had come and settled in it and given it a name. What sort of plants and animals would you expect? Do you think I am wearing underwear? Are all the plants and animals you see what would have seen here?

Leader: Jenny (969-2776)

TRIPSLIP # 7

Times: 9 AM - 2 PM

July 10, 1997

Jenny's Own Design

Equipment: daypack, lunch, water, boots, field kit, COLORED PENCILS and some PAPER

Today we're going to be doing a few different things. First we're going to head over to the Mount Ida College campus and look around at some of the nifty things that are growing in there. We can bring along some guidebooks to assist us in identifying some of the vegetation there.

We will also be wandering around Oak Hill checking out people's lawns and gardens to see what are some common plants and flowers that people in Newton have in their yards. We're going to make some attempts at drawing some of the plants that we see, and we can hang them up to decorate the student room if you guys want to. **It's okay if you aren't a master artist!** I couldn't draw to save my life, but that doesn't matter, we will still come up with some great pictures! Now, we also must remember that we CANNOT, in any way disturb ANYTHING in anyone's yard!

*****FUN FACT: Every day Americans throw out around 20,000 T.V.'s!*******

Some words to keep in mind for today: monocot, dicot, palmate, pinnate, autotroph, ecosystem

Tripslip #3
July 3, 1997
Times:9am-2pm
Start/finish: Newton South

Sarah's Own Design

With help from Alex (thanks Alex!)

Leaders: Sarah Northrup 965-4602 and Alex Kraus 964-7768

Equipment: Hiking boots, field kit, backpack, WATER, lunch, first aid kit, rain gear

Alex and I were chatting and trying to come up with something that would be fun, as well as teach something that you can use for the rest of the summer... and possibly after that! We realized that something we would like to teach would be how to use those funky field guides that we (the leaders) pull out of our bags when you ask us what type of plant something is. I never had a real lesson in how to correctly use one until recently, and thought it might be fun to pass on the information. Two types of guides that we will be using are a wildflower guide and a tree guide. (Maybe if we're really nice to Alex he'll show us how to use a fungi guide...)

Questions:

1. Does anyone have any ideas why we would want to be able to use a field guide?

2. Do we really need to know the difference between the different kinds of plants?

3. Is there any reason to know what the different parts of a flower or a tree are?

Bonus: How many different parts of a flower can you name? Write them down on the back of the tripslip and bring it with you... We'll see how many you can come up with...

7/8/97

tripslip #5

Leaders: Alex Kraus - 964-7768

Peter Montague - 969-4196

Meet at: South

Time: 9 - 2

Equipment List

Day Pack

Lunch

Field Kit

Sun Block (if you burn, but its a good idea if you don't)

Rain Gear

Pocket Knife

boots

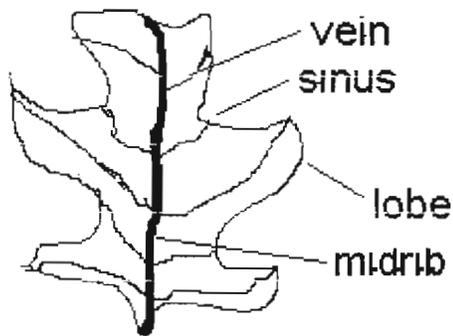
Notepad + Pencils

Water

Newton Gemetry

Today Alex and Peter, your fearless leaders, will be taking you to the Newton Cemetery. Not to look for ghosts, but to look at the many trees that are kept there. We will be identifying many tree species, some that you have already learned, some you haven't. Do you know the difference between red, white, and pin oak? Hint it has to do with the lobes and sinuses.

SO... What are lobes and sinuses? A lobe is part of your ear, and a sinus is part of your nose. They are also parts of a leaf.



If you have had Peter before you should know what compound leaves, and leaflets are. If you haven't you will at the end of the trip. Do you know the relation between a leaflet and the compound leaf, if you do you win a fabulous fun filled trip to Newton Cemetery, and if you don't you still win. So prepare to have fun and remember that at the end of the day we will be testing your knowledge of trees, so study.

Peter's Own Design

Equipment List

Boots	Fieldkit, including
Daypack	Extra boot-laces
Lunch	First-aid kit (with mole-skin)
Water	Spare change
Sunblock	Small note-book
Rain gear	

Old clothes (that you do
not want to get dye on)
A white t-shirt
Anything else that you
want to dye

Today you get a day off from hiking and biking, because today we are going to do **tie-dying**. But don't think that that means that you are not going to do any work. Oh, man! Work! Yes, work. We get to go out and collect plants with the desired colors and sort them. After this is done, we are ready to boil them. This takes a while because we must get the color very potent so it won't wash out. Now it is time for some real fun. This is when we rubber-band our shirts to get the pattern that we want. After that is done, we can start to dye the shirts. After we are done dying, we will leave the shirts in zip-lock bags so the color will set. After your trip on the next day, you will take the shirts home with you and wash them. I will give you washing instructions at the time. See you then.

Broadmore

Tripslip #9

Leaders: Allan (969-4057)

Alex (964-7768)

Times: 8:28-3:01

Equipment: Your Bike, Filed kit, HELMET, sneakers (no boots), three dollars for admission, and lots of water. We also might be able to stop for ice cream o the way back. If you want you can bring extra cash. You don't have to. It's optional.

As you know this is a bike trip so please remember your Helmet. Today we will be heading out to one of my favorite spots in the entire world. It's know to us wee folk as Broadmore and to us rappers as M.C. Broadmore. Word to your moth.... Opps...sorry about that. I got caught up in the moment. Anyway...this area is simply beautiful. It is a piece of work.

Broadmore is a wild life refuge that is owned by the National Audubon Society. It has varied habitats from wetland to wooded areas to open fields. Why is it important that there is a large diversity of plants and habitats? I'm glad that you asked because I have been wanting to tell someone the answer this for a long long time. The answer is very simple. The more diverse an ecosystem is the healthier it will be. Why is this? I'll tell you that tomorrow.

Fast Facts

If Americans started to carpool we could save over 1 million gallons of gas per day. On average there is one person in each car on the road.

Many detergents contain phosphates. If these phosphates enter the water supply they can cause large amounts of damage. Try to buy detergent that is free of phosphates. Most liquid ones are.

Now get ready for...

Trip slip #12
July 19, 1994

BROADMOOR

AUDUBON SOCIETY 

BIKE TRIP

← I think it's a leaf

Leaders: Kathy Thorp
527-3681
Peter M.
969-4196

Times: 8:45 - 3 PM
Meet at South

Equipment: field kit,
sneakers, bike,
helmet, water,
lunch, \$3 or 4
for admission

Okay, let's get psyched for this bike trip. It's a fairly long trip so just come with everything and we'll do just fine.

This place is a wildlife sanctuary. Hopefully we'll get to see some of it.

Broadmoor has developed several programs and written up pamphlets concerning water conservation and natural energy. You'll see the building ~~um~~ which gives a perfect example of using natural resources of light and heat. Even their ~~composting~~ "light shelf", spreading sunlight throughout the building reduces electrical lighting needs by 80 percent below current energy code standards.

There are also many miles of trails that we might get to hike on if we have time.



CLASSIFICATION SYSTEM:

- Kingdom
- Phylum
- Class
- Order
- Family
- Genus
- Species

→ How do you think this system works?

What are some ways you can conserve water and energy?

→ BRING \$ for ice cream - we'll stop on the way back. Be HAPPY →



Trip slip #11
Leaders: Agatha Clancy
(969-7407)
Allan Telio
(969-4057)

Date: 18 July 1995
Time: 9am-2pm
Equipment: Bicycle, Field
Kit, Sneakers, Two
Canteens (one with water,
one with something
sweet), Lunch, \$Money\$\$
for Ice Cream.



Do you know ways of conserving
at home? Here are a couple:

Get a composte heap
(you can turn food waste
into rich soil, your parents
can get a starter kit at a
hardware store.

Save the water it takes to
warm up the shower and
use it for watering plants.

Turn off the lights when
you leave a room.

Don't let anything electric
run needlessly (television,
radio, air conditioners.)

Broadmoore

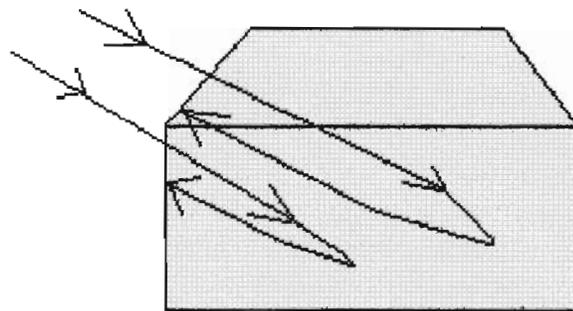
(there's no M.C. here)

Tomorrow you guys and Allan and
Agatha will be off to Broadmoore. I (DanT.)
will not be attending the trip but this is my
trip slip for Agatha. It will cost three dollars
for admission, so bring that along with the
money you bring for Ice Cream.

Broadmoore is a Conservation Area in
every sense of the word. It is run by the
Audobon Society which is an
establishment which does many things in
the form of conservation.

At Broodmoore you will see many
conserving things such as: Solar and
Water energy structures, a bird
sanctuary, greenhouses and other things
along the lines of that nature.

Do you know how a greenhouse works?



Do you know what the arrows represent?

* Broadmore *



Tripslip #10

Leaders: The one and only big bad Allan T. (969-4057)

The one and only small and good Dan T. (527-2763)

Times: 8:29-3:00 Equipment: Your bike, Field kit, sneakers
(no hiking boots), and lots of water

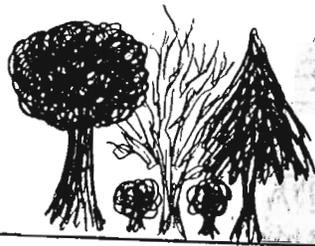
Today we will be heading out to Broadmore. This is a bike trip so please remember to bring you helmet. If you do not have one please tell one of us so that we can get you one.

It is also very important to bring lot of water. For the past couple of days we have been in a heat wave. A heat wave is when the temp. is over 90 degrees for more than three days in a row. During most of the summer you will have temps over 90 degrees for such extended times. You must have certain conditions to have a heat wave.

Normally the temp. of the air will climbs as the sun heats it. This will cause the air to raise and by the end of the day we have a thunderstorm. The thunderstorm will release all of the heat and energy that has gathered during the day. After the storm the temp. goes down and everybody is happy. During a heat wave this does not occur. This is because there is a very strong high pressure system over us. This high pressure system does not allow the hot air to rise. Since the air does not raise it is not possible for thunderstorms to occur. Without the the thunderstorms there is no way to release the heat. The temp. continues to rise and we suffer more and more.



GREAT MEADOWS

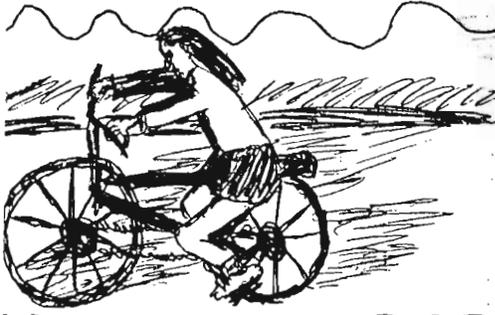


Stacy's O.D.
Tripslip #10
July 17, 1992

This is a bike trip to the Great Meadows National Wildlife Refuge. Great Meadows is very large; it consists of two main sections--one in Concord and one in Sudbury. We will be biking to the Concord section. This is a 40 to 50 mile bike trip altogether (there and back).

Times: 8:30 am - 4:00 pm
Leaders: Stacy (965-4988) + Garen (332-4015)
Equipment: bike, bike helmet - this is mandatory, if you don't have one then tell me!! Wear sneakers - NO BOOTS.
Field kit, Big Lunch, 2 water bottles, and if you have bike tools then bring them. Wear SHORTS!! - you'll be hot.

What is Great Meadows? It is a refuge that was established in 1944 to provide wetlands for migratory water birds. The original 250 acres were donated by Samuel Hoar. More than 200 species of birds are regularly seen in the refuge. We'll be looking for various species of birds and also we will be able to identify trees in the area.



Objectives: Look at and try to identify the birds we see. Get lots of exercise to get into shape for the Mountains. And... most important - sweat a lot!

Some Birds that are commonly seen and heard during the Summer at Great Meadows:

- Pied-billed Grebe
- Blue-winged Teal
- Canada Goose
- Blue Jay
- Semipalmated Sandpiper
- Ring-necked Pheasant
- Yellow Warbler
- Chipping Sparrow
- Common Crow
- Herring Gull
- Downy Woodpecker
- Starling
- Black Duck
- Common Grackle
- Least Sandpiper
- Mourning Dove
- Eastern Kingbird
- Wood Duck
- Virginia Rail
- Mallard
- Common Gallinule
- Eastern Phoebe
- Common Flicker
- Red-winged Blackbird
- SOBA

Safety - Rules of the Road

- 1) Ride on the right side of the road
- 2) use hand signals:
 - to turn right
 - to turn left
 - to stop
- 3) Stay spaced out



MONDAY, JULY 20, 1992

LEADERS: Pam (527-5831)
Molly (965-1979)

TIMES: 8:30 -

EQUIPMENT: BIKE, helmet, sneakers,
2 water bottles, lunch, field kit,
any bike repair tools you may have,
money for admission.

TRIP SLIP # 11

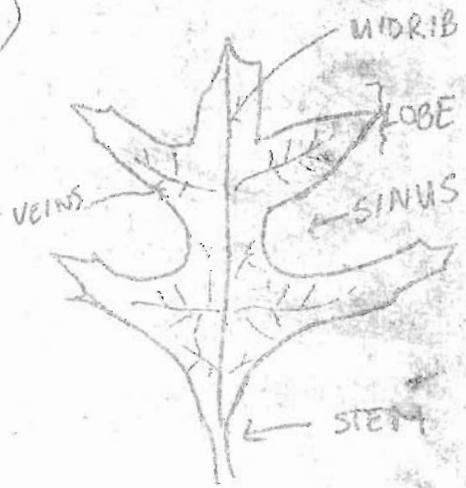
GARDEN IN THE WOODS



THIS IS A
BIKE
TRIP!

This trip is a very long bike ride,
so be prepared and forewarned. Garden
In the Woods is a large preserved nature area
in Framingham. It is a good example of
many different types of environments, from
climax forests to wetlands. It is a great
place to see how different environments
relate to each other.

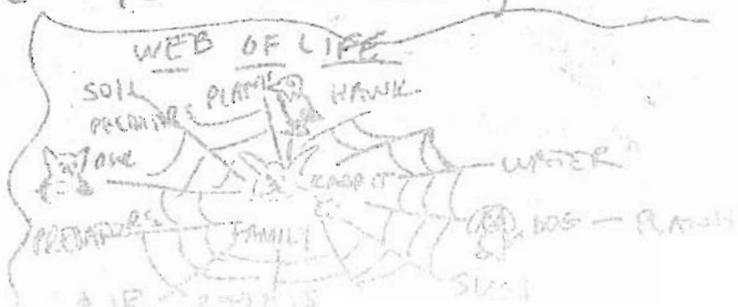
LEAVES



What is ECOLOGY? Ecology is the organized
body of knowledge which deals with the
interrelationships between living organ-
isms and their environment. Ecology
is a relatively new science - since
the 19th century. However, for millions of years, people have
been observing plants and animals in their natural "homes."

Everything in nature is related. All things in nature depend
upon each other, like a factory. The ceaseless exchanges of
materials and of energy between living things and their environment
follow circular pathways, which are repeated endlessly in
cycles.

WHAT ARE
PRODUCERS,
CONSUMERS,
AND
DECOMPOSERS?
How do they relate
to the cycles of
nature.



Jesse's O.D.

Location: Broadmoor wildlife sanctuary in Natick.

What It Is: Broadmoor is a 600 acre wild life sanctuary run by the Massachusetts Audubon Society. It is home to many different types of animals. Wood ducks, painted turtles, kingfishers, great blue herons, hawks, great horned owls, raccoons, fox, deer, and river otter inhabit Broadmoor. There is also remains of an old mill, and mill stone that was part of a village established by the Massachusetts Indian tribe led by Reverend John Eliot, who replaced previous native American inhabitants who fell victim to the plague of 1616.

What I'm Planing To Do There: I am not 100 percent shore what I am going to be doing at Broadmoor. I think one thing that I will definitely do with the campers (ha ha ha) is identification of the animals that live in Broadmoor. I also think that I will talk about the food web, and the different populations in Broadmoor, and the community in Broadmoor. I want to do some kind of activity involving these things.

How I Am Going To Get There: I am not 100 percent shore of the root that I will be taking to get to Broadmoor. The main problem that I am encountering is I don't know how busy Eliot St. in Natick is. If it is very busy, and dangerous I will halve to go around it, and access Broadmoor threw South St. To do this I would need to go south of Broadmoor, and then go back up to it.

Thursday July 15, 1993

EUTROPHICATION

TRIP

LEADERS: Pam Mahoney (527-5831)
Kathy Thorp ()

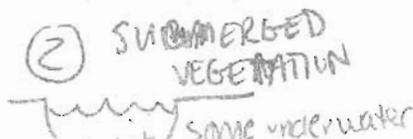
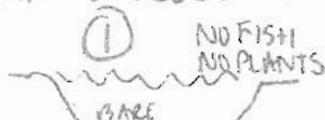
TIMES: 9am - 3pm

EQUIPMENT: 2 pairs of socks, a BIG lunch, 2 pairs of socks, field kit, a dollar or so in case we stop for a snack!

Does anyone know why I chose the Cove for this trip? (HINT - what happened there last year?)

Today we will be going to Auburndale (Ware's) Cove to learn about a process called EUTROPHICATION. This is the process that all ponds + ~~lakes~~ ^{lakes} undergo - essentially it is pond succession at an accelerated rate. When phosphates (from fertilizer, etc) wash into a pond, it stimulates the rapid growth of the plants in the pond and on the edges of the pond. The plants grow bigger, and use up all the oxygen in the pond, so the fish can't breathe, and they die. The plants continue to grow toward the center of the pond. At the same time, plants die, + the pond fills in. Eventually, the water is gone, + the "pond" is on its way to becoming a fore

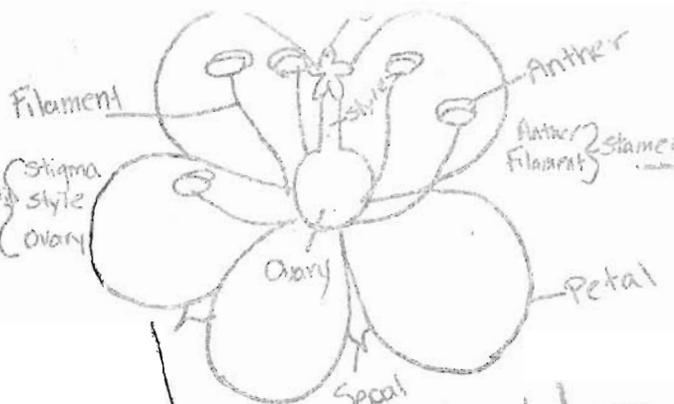
POND SUCCESSION:



Leader:

The One and Only

Jenny Casavant
(969-2776)



EQUIPMENT

Field Kit

*2 Containers of Water

Wear 2 pairs of socks

Lunch

Optional: \$

(There is a chance we will be able to stop for ice cream if we're making good time)

JENNY'S

O.D.

FAST FACT
mmmm
A dripping faucet, in one day, can waste 40 gallons of water.

Today we're off a small woods in Norantum/Newtonville. The Charles River runs through the ~~woods~~ Woods so we'll be able to take some water tests. And since we'll be in the woods we can practice our plant identification skills and using a handy dandy tree guide.

THE PINES

W - White Pine
5 Needles
W H I E
1 2 3 4 5

V - Pitch Pine
3 Needles
Like a Pitchfork Ψ

V - Red Pine
2 Needles
No fun way to remember this one, you just have to memorize it.

Question: What makes a tree, a tree?

Answer: It has to have a trunk that is at least 3.5 inches thick (diameter) and be at least 13ft tall

Question: Why is the Charles River brown?

Answer: You'll find out tomorrow! 😊

DRUMLIN FARM

this is a bicycle wheel

Stacy Sanchez
TRIP # 11
July 15, 1993

Equipment: - BIKE - this is a bike trip!
- Helmet - you must have this - if you don't have one call Agatha or me, OR borrow one!



meet at South
times: 8:30 am
to 3:00 pm

my # is 965-4988



Optional: - you can wear either speakers or boots
- if you have bike repair tools, BRING THEM!

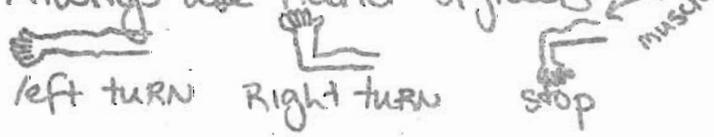
Leaders: me & Agatha

For those of you who haven't realized it, this is a bike trip. Meaning: you don't have to go on a long walking trip like Stonybrook today. Yay! We'll go to the FARM & identify stuff and look at neat-o FARM animals like pigs (did you know that they're actually very clean animals? People also keep certain small breeds of pigs as pets). We'll see horses & cows (do not look at above picture for an accurate representation of a cow) and hopefully we won't see much animal evidence before we get to the FARM (because it would probably be in the form of roadkill)

my sad attempt at a bike. Hint: if your bike looks like this, you'd better get a new one. Remember: Get to South early cuz we've got to check your bikes before we leave!

REMEMBER: RULES OF THE ROAD

1. Single File
2. Keep together
3. Stay on the right side of the road
4. Always use hand signals



so... you're wondering why called Drumlin Farm is not to confuse you, but it is not because there is a mound of land created by a glacier, very steep on one side & sloping gradually on the other side. No one was exactly how drumlins were formed.

one last tidbit: yes, a glacier did help form parts of Drumlin Farm because there's a Kettle Pond there. Do you know what this is? Also, Review POND SUCCESSION because we'll

Wellesley

Town Forest (Sarah's

Trip slip #3
July 3, 1996
9am-2pm
Start at South

Own
Design)

Equipment: Boots, lunch, water,
field kit, sunscreen, (you know the usual)

Leaders: Sarah #465-4602

We're headed for the Wellesley Town Forest, also known as Rosemary Brook. On this trip we're going to practice mapping skills, identify trees and do some water tests.

There might be some ducks ~~or~~ or geese at the Pond, **DO NOT FEED THEM!**

Thanks:

Pitch Pine

Asters
White oak
Chicory

Willows

Pineapple
Cattails

Did anybody do any water tests yesterday? Why are water tests important? Do water tests tell us anything we would want to know? What's she babbling about? Just a few questions to keep in mind on the trip. Let's see how many we can get answers to. I think the first one is the hardest!

Drumlin Farm

Trip slip #31
(969-7407) Agatha Clancy
(965-4988) Stacy Sanchez

July 15, 1993
Time 8:30-3:00

equipment: Bike (Helmet) 2 canteens
Field kit sneakers money

What is a Drumlin? It is large piles of rubble that are left behind by glaciers. These piles of rubble are so large they form Hills. When the water from the sea rises it floods the lower lands, and sometimes the Drumlins become Islands.

Drumlin Farm is the Headquarters of the Massachusetts Audubon Society. It is one of the oldest conservation organizations in the world. There have been over 150 species of birds that have been seen.

A few animals that we will see there are horses, pigs, cows, raccoons, owls, and chicken. We will be talking about the adaptation of the animals.

If we have time we may be looking around some of the trails there. We will be able to see the animals. What is adaptation? It is settling into your surroundings for existence. Some plants are poisonous because they needed to protect themselves. Animals have things to protect themselves. Camouflage and smells and things that can hurt you so they can protect themselves.

Rules of the Road

1. Ride in single file (keeping space between one another)
2. Ride on the right side of the road
3. Use hand signals

DRUMLIN FARM

STACY SANCHEZ
TRIP # 11
July 15, 1993

Equipment: - BIKE - this is a bike trip!
- Helmet - you must have this - if you don't have one call Agatha OR ME, OR borrow one!

ok - this was supposed to be a cow
But I know it's a dog.

meet at South times: 8:30 AM to 3:00 PM

my # is 965-4988



Optional: - you can wear either speakers or boots
- if you have bike repair tools, BRING THEM!

Leaders: me & Agatha

For those of you who haven't realized it, this is a bike trip. Meaning: you don't have to go on a long walking trip like Stonybrook today. Yay! We'll go to the farm & identify stuff and look at neat-o farm animals like pigs (did you know that they're actually very clean animals? People also keep certain small breeds of pigs as pets). We'll see horses & cows (do not look at above picture for an accurate representation of a cow) and hopefully we won't see much animal evidence before we get to the farm (because it would probably be in the form of roadkill).

my sad attempt at a bike. Hint: if your bike looks like this, you'd better get a new one. Remember: Get to South early cuz we've got to check your bikes before we leave!

5000... you're wondering why Drumlin Farm is called Drumlin Farm. It is not because there is a drumlin there - because there is a drumlin there. Do you know what a drumlin is? It's a mound of land created by a glacier, very steep on one side but sloping gradually on the other side. No one knows exactly how drumlins were formed. (How sad)

- REMEMBER: RULES OF THE ROAD FOR BIKING
1. Single File
 2. Keep together
 3. Stay on the right side of the road
 4. Always use hand signals
- left turn right turn stop

one last tidbit: yes, a glacier did help form parts of Drumlin Farm because there's a kettle pond there. Do you know what this is? Also, review POUND SUCCESSION because we'll be going over that.

Thursday July 15, 1993

Does anyone know why I chose the Cove for this trip? (HINT - what happened there last year?)

EUTROPHICATION TRIP

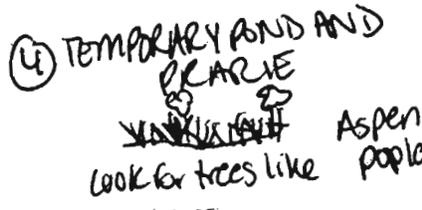
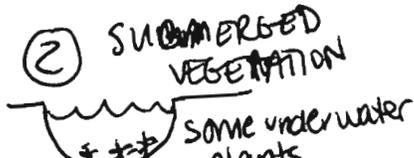
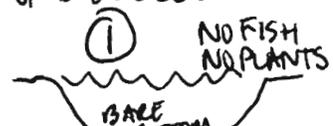
LEADERS: Pam Mahoney (527-5831)
Kathy Thorp ()

TIMES: 9am - 3pm

EQUIPMENT: 2 pairs of socks, a BIG lunch, 2 pairs of socks, field kit, a dollar or so in case we stop for a snack!

Today we will be going to Auburndale (Ware's) Cove to learn about a process called EUTROPHICATION. This is the process that all ponds + ~~lakes~~ ^{lakes} undergo - essentially it is pond succession at an accelerated rate. When phosphates (from fertilizer, etc) wash into a pond, it stimulates the rapid growth of the plants in the pond and on the edges of the pond. The plants grow bigger, and use up all the oxygen in the pond, so the fish can't breathe, and they die. The plants continue to grow toward the center of the pond. At the same time, plants die, + the pond fills in. Eventually, the water is gone, + the "pond" is on its way to becoming a forest.

POND SUCCESSION:



WILD CARD

Date: 7/20/92

Time: 9am - 2pm

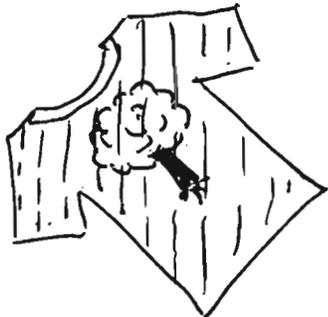
Leader: Delio Tramontozzi

Phone #: 244-3377

◆ Dyes (tie-dyeing)

Equipment: Bring a white Cotton T-shirt (Blank) that you want to dye, field kit, you must wear your hiking boots, wear scrubby clothing, bring a bucket, also bring any other white articles of clothing (boxers, socks?)

Today we will be dyeing our shirts to make wild and wacky designs. Its a good thing that we get to stay at South today. Do you ever have the problem of finding the right shirt for you? Well now we can make our own shirts - yes! I'll bring some rubber bands and string to make different patterns - let's go nuts on these shirts. On the front of the shirt you will make a drawing of an animal or tree that is your favorite and that can survive many weather conditions - make your own! mix and combine plants - use traits of plants and trees that help them survive harsh conditions. Alright, let's get excited!



Trip slip #3
7-9-01

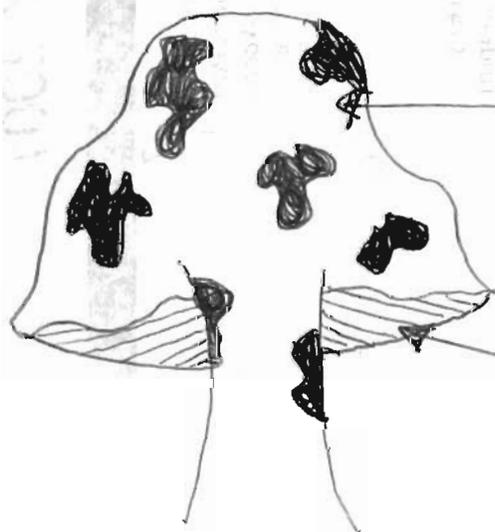
Leader: Julie - 617-964-7248

Equipment:

- Boots
- Field kit
- H₂O
- Lunch
- Tar
- Some kind of mushroom

Julie's O.D.

Today is my own design. This means that I can do whatever I want. I decided that today we are going to go to Hammond Woods. Hammond Woods are the woods next to the Chestnut Hill Mall. These woods have some pretty cool rock formations. Word on the street is some of the large rocks are the same as the rocks found in Africa. Remember PANGEA?? I am going to have some cool activities for us to do once we get there. Has anyone ever made mushroom prints? I am going to bring some larger mushrooms, but we can find mushrooms in the woods to print, so bring a pair of gloves so you won't have to touch any yucky fungi. If anyone has any neat games to play bring them along.



Bad drawing of a mushroom.

what a spore print should look like

spores for prints.



Date: Monday, July 23 Time: 8:30-4

Equipment: BIKE,
HELMET, sneakers,
much water, lunch,
field kit (be sure
to have your notebook
and a writing stick),
gifts to lavish upon
your leaders

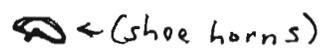
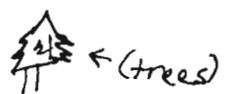
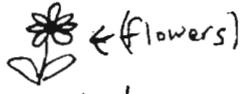


Leaders: Sarina "Dude" Yospin
(617) 969-3966
Amelia "Sweet" Runyan
(617) 244-8836



Trip slip #13

My momma told me that
life is like a box of...



CRONK'S ROCKY WOODLAND

(rockiness)



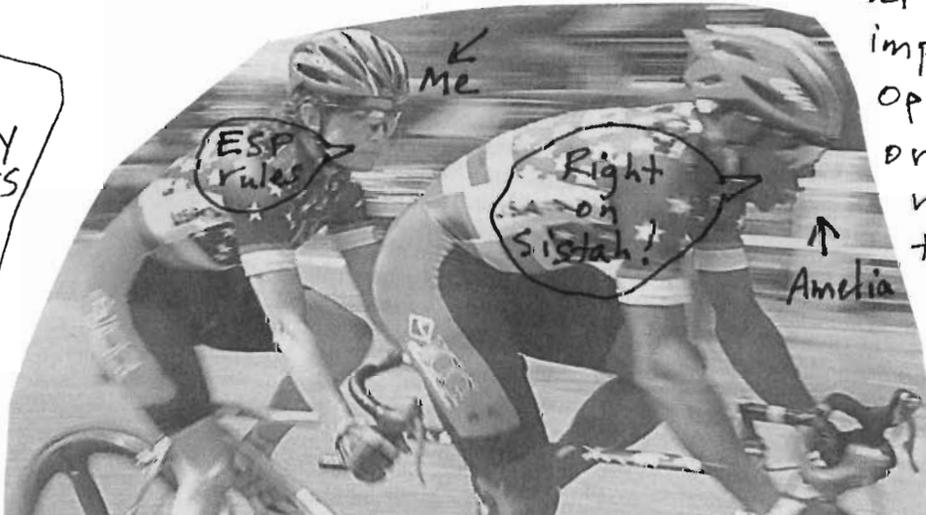
!!!!

Do not be deceived by the late ex-prez Franklin
D. Roosevelt; Cronk's Rocky Woodland is not a type of
chocolate. In reality, it's a type of woodland! This area
is about a half-acre of wild flowers (including
pink lady's slipper → ) , trees, and other plants.

Besides ~~ook~~-ing and ~~abh~~-ing at the natural beaut,
all around us, we'll check out all the different crazy,
biodiverse wildlife we can find, and learn
about why every thing we find is clutch
in the web of life that exists around us, and
how everything depends on everything else to survive
Plus, we can learn about the totally uncool effects
people can have on natural life. Man, do we screw things
up! That's why it's
important to preserv
open spaces like thi
one. Plus, its
name is really fun
to say. Cronk!
Just try it. Cronk
Cronk cronk cronk
Hee hee! I am
easily amused.

MEALO & ME
ARE ACTUALLY
WORLD-CLASS
BIKERS BY
NIGHT. YES,
INDEEDY.

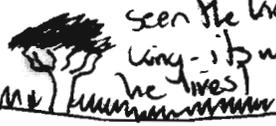
(except for the
part about us
being world-class
bikers, it's
all true.)



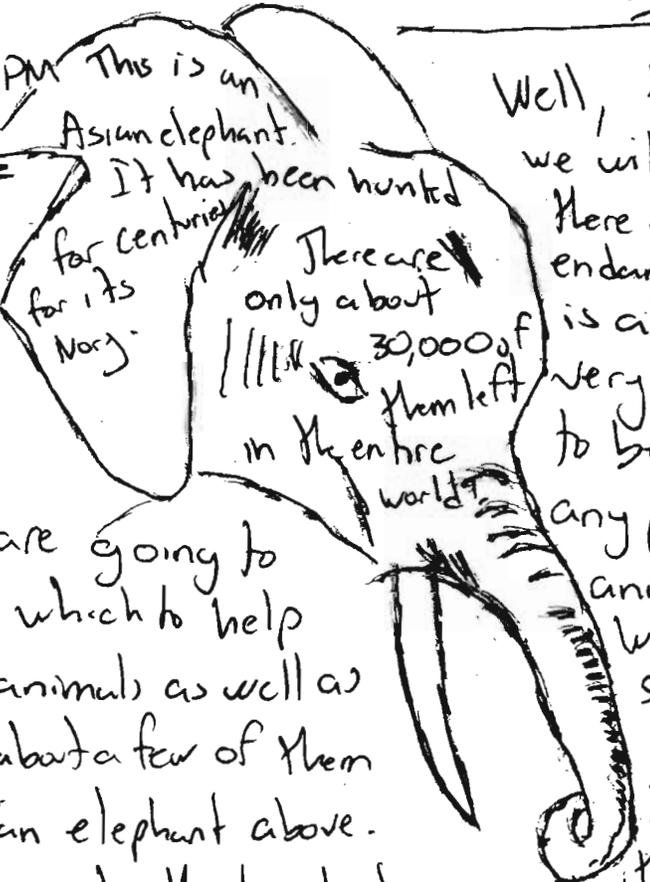
- 1. Gordon Roble and
- 2. Peter Montague T.S.#2
- 1. 244-9304
- 2.
- 7/5/94

Endangered Species (my own design) Day

The African veldt (if you've seen the lion king - it's where he lives)



9:00am to 2:00pm
Bring your entire field kit - H₂O and boob
meet at Newton South

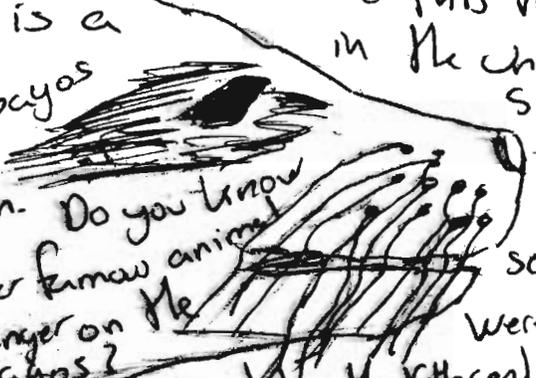


This is an Asian elephant. It has been hunted for centuries for its ivory. There are only about 30,000 of them left in the entire world.

Today we are going to learn ways in which to help protect these animals as well as find out a bit about a few of them like the Asian elephant above. I want you guys to think about some endangered species you know of. It doesn't matter if they are here in Mass. or across the world in Africa. You know even animals in the water aren't safe because they are hunted - like many whales for food and the oil their blubber supplies. What might other ~~some~~ animals be hunted for, particularly ones like a wolf or bear. Why would an animal like a seal or elephant be in trouble? We will answer all these questions today to some more.

Well, this is it, your first trip. Today we will be going to Hammond Woods and there we will explore the world of endangered species. An endangered species is a type of animal where there are very few of them left and they need to be protected. Can you think of any programs that support endangered animals? The WWF (The World Wildlife Fund) is one. They set up special places for these animals to live without fear from man. In order to also help protect these species in America, the U.S. government passed an endangered Species Act to protect the 151 endangered species in America. Just think how many there are in the world if there are this many in the United States!!

This is a Galapagos sea lion. Do you know what other famous animal is in danger on the Galapagos? These sea lions were popular in the 19th century but they are now coming back.



Remember - Extinct is forever!!

Times - 9:00am to 2:00pm
Meet at - Newton South
Other Leader - Rachel Kuller
332-5932

*Call your leader for
any problems or questions,
or if you will be sick
or absent.

Molly Smith
Tripslip #3
July, 5, 1993

NATIVE AMERICAN AWARENESS

AN OWN-DESIGN BY MOLLY AND RACHEL

Equipment: Field kit, day-pack, lunch, water, boots ~~and~~ and
any knowledge or stories you have about
Native Americans, especially local tribes.

When the Europeans killed off thousands of Native tribes here in the current U.S., they not only destroyed people, but also a very valuable culture. This culture was unique because its foundation lay in its reverence for nature. During the 300 years since the foundation of Plymouth Plantation, we have gradually lost the admiration and respect the true Americans had for our environment. Because of this, we face many man-caused problems that threaten our lives. Since ESP focuses on our environment, Rachel and I felt that it was appropriate to pay tribute to the people whose values we preach.

we will be walking to Bullough's Pond which is the subject of a book of poetry written from the perspective of a Native American man. Where we go isn't necessarily the most important aspect of this trip, however. Our goal is to restore the spirit and appreciation of nature that the NAs had. You would be surprised at how much Newton, has been influenced by tribes such as the Wampanoags and the Massachusetts Indians. Can you name three things in your life that are somehow linked to NAs? Tomorrow we will test your knowledge!

As the Wampanoags and the Massachusetts Indians influenced by tribes such as the Wampanoags and the Massachusetts Indians, you would be surprised at how much Newton, has been influenced by tribes such as the Wampanoags and the Massachusetts Indians. Can you name three things in your life that are somehow linked to NAs? Tomorrow we will test your knowledge!

OWN DESIGN

Trip # 13

Agatha Clancy

969-7407

July 20, 1994

9:00am - 3:00pm

Natick Community Farm

The Natick community farm is run by donations that the city gives them and the money they make from the farm stand. There are children there that take care of the animals, garden and the farm stand. The farm is all organic. This means that there are no chemicals used to grow anything. The animals are also fed organic food. The farm uses compost which has natural things that enable the things in the garden to grow. This is good because these things don't harm the vegetables or ground. Pesticides can remain on fruits and vegetables even after they are washed and can harm the ground and even travel and harm water supplies.

Equipment -

Bicycle
Helmet
lunch
lots of water
field kit
notebook / pencil

Besides the farm having many vegetables they also make pure maple syrup. They have many places where they have tapped trees to collect the sap. Do you know that sap is 90% water. To make syrup they have to boil the sap at a very high temperature so that the water is evaporated and the syrup is left. It tastes a lot different from syrup like Aunt Semma because preservatives and sugar have been added.

ripslip # 5 time: 9-2

leaders: Dan Thomases

527-2763

Dan Polivy

964-1313

Date: 11 July 1995

Equipment: Field-Pack

Lunch, Water and
hiking boots.

wow!
a Dan Trip

Dan's Own Design to Goddard-Christina

Goddard-Christina is one of
Newton's Conservation areas.

It is a park with many trees
and vegetation which make it ~~the~~

have no open space for us humans
but it is a greathome for birds and
other living creatures. Goddard-
Christina acts as the drainage
cleanup and pick up area for the
surrounding village. In other
words all of the water run-off from
the surrounding house is used by the
vegetation and is therefore cleaned
to go into the Charles River.

Everything that goes into Newton
Brooks and Stream eventually finds its
way to the Charles River.

Do you know what the Real length
of the Charles River is through
Newton?
(in for miles)

WELCOME TO THE Audubon #11

Leaders: Leean Thomases
 527-2763
 Garen Corbette
 332-4015

Society! Times:
 8:30^{am} - 3:30^{pm}

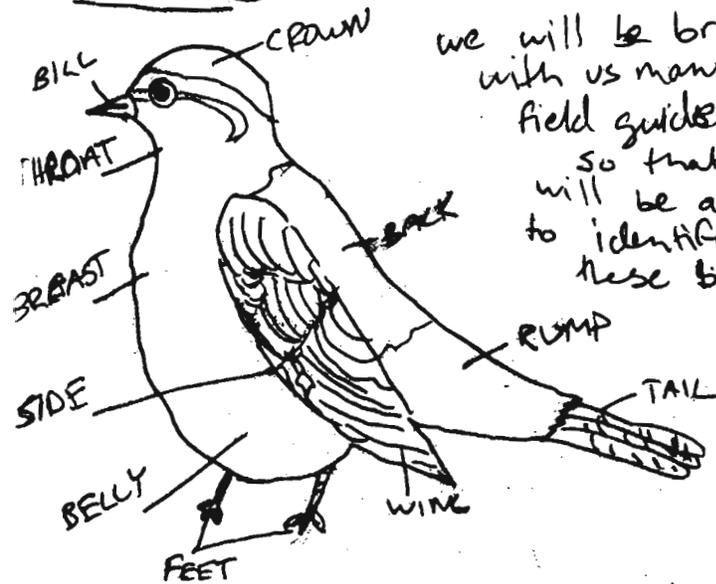
Date: Tuesday 16th

THIS IS A BIKE TRIP!

Equipment: BIKE! sneakers, helmet, 2 canteens, Lunch, field kit
 any biking tools you may own maybe some repair stuff
 like a flat tire repair kit. Signed Permission Slip!

At the Audubon Society we will see many things among these things will be specifically trees and birds which I will now discuss:

BIRDS

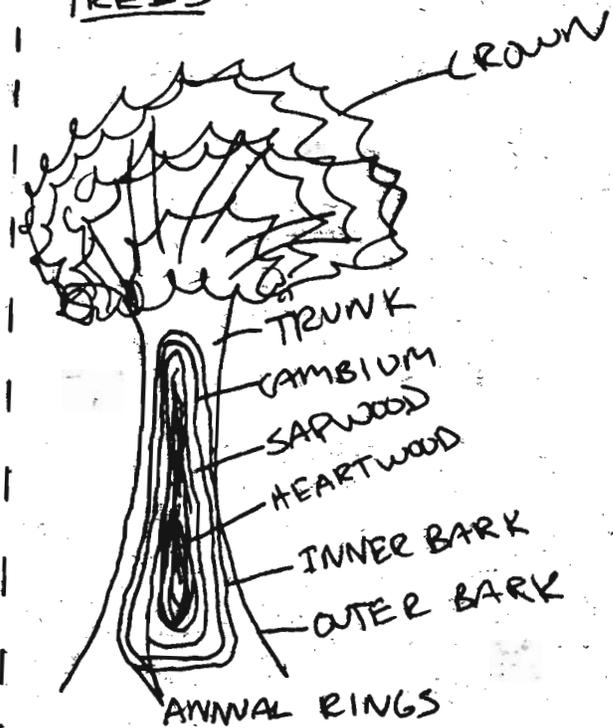


we will be bringing with us many field guides so that we will be able to identify these birds

When birdwatch one must ask oneself a number of different questions in order to identify the bird:

- What is its shape?
- is it chunky or slender?
- What are its wings like?
- is it long legged?
- does it have a long or short bill?
- What does its tail look like?

TREES



HERE ARE 3 DEFINITIONS WHAT ARE THE OTHER PARTS FOR?

CAMBIUM → Layer of cells which divide and grow to produce a new layer of bark and wood between the old bark + wood each year.

HEART WOOD → core of inactive cells formed Sapwood which gives the tree strength + durability

OUTER BARK → protects tree from weather insects, disease, fire + animals.

MONDAY, JULY 20, 1992

TRIP SLIP # 11

LEADERS: Pam (527-5831)
Molly (965-1979)

TIMES: 8:30 -

EQUIPMENT: BIKE, helmet, sneakers,
2 water bottles, lunch, field kit,
any bike repair tools you may have,
MONEY for admission.

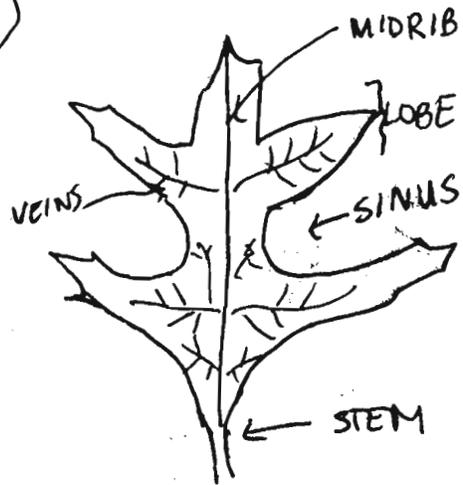
GARDEN IN THE WOODS



THIS IS A
BIKE
TRIP!

This trip is a very long bike ride,
so be prepared and forewarned. Garden
In the Woods is a large preserved nature area
in Framingham. It is a good example of
many different types of environments, from
climax forests to wetlands. It is a great
place to see how different environments
relate to each other.

LEAVES

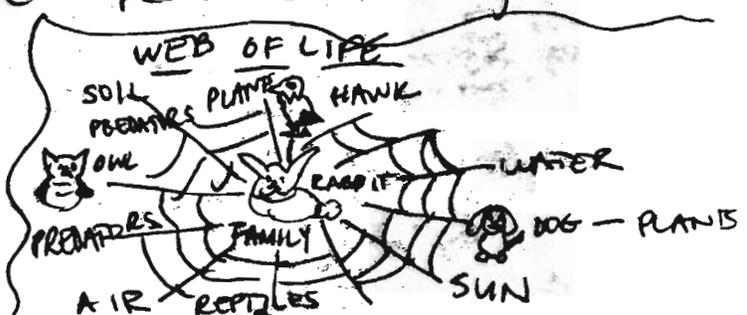


What is ECOLOGY? Ecology is the organized
body of knowledge which deals with the
interrelationships between living organ-
isms and their environment. Ecology
is a relatively new science - since
the 19th century. However, for millions of years, people have
been observing plants and animals in their natural "homes."

Everything in nature is related. All things in nature depend
upon each other, like a factory. The ceaseless exchanges of
materials and of energy between living things and their environment
follow circular pathways, which are repeated endlessly in
cycles.



WHAT ARE
PRODUCERS,
CONSUMERS,
AND
DECOMPOSERS?
How do they relate
to the cycles of
nature.



Trip slip #11
July 17, 1990

your
✓ Leaders:

Garen Corbett (332-4015)
Leea Thomases (527-2763)

Welcome to the Audubon Society!

Welcome to the beautiful Audubon Society Preserve along the beautiful Concord River. We will be seeing pristine forest. Remember the climax stage? at its best. We will also see numerous species of birds and animals.

As you may have guessed, this week begins our true mountain preparation.

Remember, with the long trips this week you want to do two things.

- 1) Bring plenty of water!
- 2) stretch out before you leave your house.

Times:
8:30 - 3:30

This is a bike trip, so obviously you need a good bike!
so here's the rundown

- 1) 10-speed + bike
- 2) any bike tools you have.
- 3) your field kit - except for hiking ponds.
- 4) Lunch
- 5) Lots of water!

- Bring plenty of snacks, and energy!

Things to think about...

- 1) What is Pond Succession?
- 2) Name the stages of Pond Succession (I'm cruel, aren't I?).
- 3) What is a Climax Forest?
- 4) What trees would you find in a climax stage?

KATHY'S OWN

Hines Pond

DESIGN

Trip slip #11
July 18, 95

Kathy 527-3681
Dan P. 964-1313

Equipment: ~~Water, Bike tools~~ lunch, field kit,
Water, Bike tools if you've got
Times: ~~9-3~~ 9-3, sunblock, money for
ice cream



THIS IS A
WALKING
TRIP!

In 1877 the Macintosh family built the pond for their ice company and discontinued using it in 1928. The company went out of business. The Needham Sporting Club bought the pond in 1953. 3 years ago, the pond was contaminated by a pump house and 3 types of trout were restocked for fishing after the pond was drained and refilled. Possibly we will take some water tests to find out what's going on with it now. Stay cool, hopefully the weather is nice and we'll have a good trip.

What is an ecosystem?
It is a delicate system "made up of a community of animals, plants, and bacteria interrelated together with its physical and chemical environment." If this system is interrupted, it leads to imbalances.
Other definitions:
habitat: a community where a plant or animal lives in.
niche: A specific job a plant/animal performs within a community.
Others we'll learn...
mutualism,
symbiosis,
parasitism



AGATHA'S OWN DESIGN

PLANTING

Trip slip #3

Agatha 969-7407

July 5, 1995

Times 9:00am -
2:00pm

EQUIPMENT: Lunch, Field kit, Boots, water
containers to plant things in (margarine tubs,
old tupperware etc.)

What is planting? It is to place, or set seeds, roots,
cuttings, or young plants in the ground to grow.
So, you're probably thinking! So if we didn't
plant anything ever we wouldn't have half of
the foods we have now. We also would not have
as many trees because we cut them down at
such a fast rate.

In this program we talk about how we
can reuse and take better care of the things
in the environment. It is also good to start
from zero!!!

Plants - Plants contain a green pigment, chlorophyll.
Chlorophyll traps light energy which is used in
the process of photosynthesis. Photosynthesis
produces nutrient molecules which serve as
food for plant and animals.

Today you will learn another way to keep the
environment healthy and it's also fun. 😊

Wellesley Town Forest

Trip slip #3
July 3, 1996
9am-2pm
Start at South

Equipment: Boots, lunch, water,
field kit, sunscreen, (you know the usual)

Own
Design)

Leaders: Sarah #965-4662

We're headed for the
Wellesley Town Forest,
also known as Rosemary
Brook. On this trip we're
going to practice mapping
skills, identify trees and
do some water tests.

There might be some ducks
~~or~~ or geese at the
Pond, DONOT
FEED THEM!

Thanks ;)

Pitch Pine

Asters
White oak
Chicory

Spillies

Peas

Cat tails

Red boat

Did
anybody
do any water
tests yesterday?
Why are water
tests important?
What's she
babbling about?
Just
a few questions to keep
in mind on the trip.
Let's see how
many we can
get answers
to. I think
the first one
is the
hardest!
;)

RUMFORD AVE. RECYCLING

Leaders: Jeffrey Wong 332-3617
Sarah Northrup 965-4602

Date: July 17, 1996

Times: 9am-3pm Trip slip #11

Meeting Place: Newton South

Equipment: Field kit, boots,
LOTS O' WATER, sun block,
WEAR 2 PAIRS OF SOCKS!,
a delicious lunch that is
healthy, yet still satisfying

As the amount of industries in the world increase each day, so does the amount of garbage. Yikes! What can we do? Well, we can put them in landfills, use incinerators, or recycle. The big problem with landfills is that chemicals from the trash seep into the ground and can get into or close by water sources. What effects might that have? The main problem with incineration is that it creates a lot of pollution. That leaves recycling. Recycling is a good thing! Keep reading on.

Recycling is good because you are reusing trash to make new things. For example, incineration ashes can be used to make concrete. Organic wastes can be used as soil conditioners. Combustible wastes are burned to produce steam or electricity. Many things can be recycled including paper, glass, and some plastics. Recycling greatly reduces the amount of solid waste we have. Paper forms more than $\frac{1}{3}$ of the municipal garbage collections. Glasses, metals, and plastics contribute 7 to 8%. Yard wastes (about 20%) and food wastes (about 9%) are usually biodegradable. Now you can see how much recycling can help the environment which we live in.

Some materials can be reused for their original purpose. Take Mr. Bottle here.  Used only once, Mr. Bottle adds to the solid waste flow; replacing it is costly and increases pollution. A returnable Mr. Bottle can average, on the other, 15 to 20 fillings before breaking.

Some things to think about..

- What is energy conservation and how does it affect our recycling?
- What are composts? What do they do for us?
- Are there any disadvantages of recycling?

RUMPFORD RECYCLING

Trip slip # 8

Agatha Clancy 969-7407

Peter Montague 969-4196

July 13, 1994

9:00am - 3:00pm

EQUIPMENT - boots, lunch, lots H₂O, field kit, Notebook/pencil

Today will be a long trip but we will be learning about ways that we can help our environment. What is recycling? It is a way of integrating waste back into the cycle of nature. Such as using excrement as fertilizer, using materials more than once for the same purpose or finding a use for something that would otherwise be thrown away. There are only two ways of getting rid of trash by landfills and incinerators. Landfills are the number one way of getting rid of trash but they fill up fast. Incinerators can reduce solid waste by as much as 90%. They are a problem because they are expensive and because of air pollution. How might incinerators also be a problem?

Paper - is about 41% of trash. Only about 10% of this can be recycled. Other products must be added to it because it breaks down easily after being recycled.

Glass - is about 8% of trash. Glass can be recycled as many times as you want but it takes $\frac{2}{3}$ of original energy to make glass to recycle it.

Metal - is about 9% of ^{trash} ~~trash~~ but it takes 90 days for it to be recycled to its original material.

Plastic - is about 70% of ~~trash~~ ^{trash}. It takes a long time for it to decompose but can only be recycled once. There are about 45-50 different kinds of plastic and only about 6 kinds can be recycled.

Leaders-

Alex (964-7768)

Peter (969-4196)

Trip #11

7/17/96

9am - 3pm

Alex's O.D.

Purgatory Swamp and Flowed Meadow

Equipment

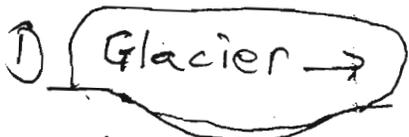
Field Kit
-unch &
lots of H₂O
Boots

What is a
Kettle Hole



A kettle hole
is a small
pond that is
formed like
this:

Ello there. For my own design we shall be trekking all the way to the other side of Newton (Yeah!) to Flowed Meadow and Purgatory swamp (they're pretty much the same place) we will get to learn about fun stuff such as: kettle holes, introduction of foreign species, wetland environments, and other fun stuff. There will also be plenty of chances for identification as well.



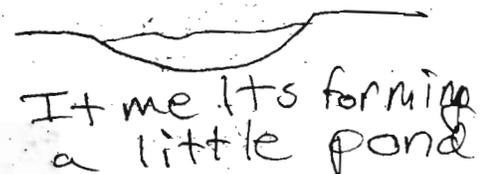
Glacier moves
along the
ground

②



A little piece
breaks off

③



It melts forming
a little pond

Things to think about that we'll cover tomorrow:
what could be the affects of introducing a foreign
species to an area?

We also might see some of those little
furry animals w/ flat tails (Hint: starts with a
B ends in an R)

STACY'S O.D. (OWN DESIGN)



Stacy's TRIPSLIP #3
 July 5, 1993
 Times: 9am-2pm
 meet at South

ACID - BASE EXPERIMENT

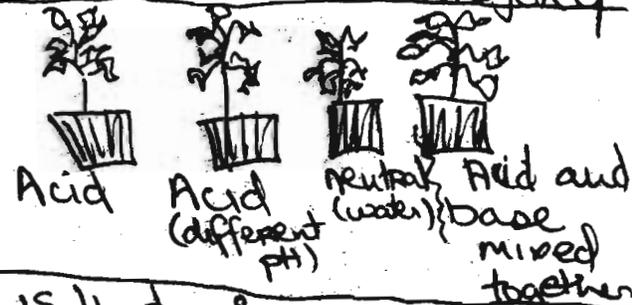
Leader: me, Stacy
 Equipment: Boots, water, lunch, field kit, 1st aid kit.

← also a Frisbee that we might have time to use!

On this trip we'll be staying in the south vicinity for the entire trip - but don't be disappointed just because we don't get to hike around all day and get all sweaty and hot - because we'll be working with cool acids and bases!! (SORRY all those massachists out there - the acids and bases we'll be using are NOT that strong) But why are we doing this, you ask? Well I'll tell you! We are going to observe the effects that different pH's have on plant life. We can observe the results of our experiment, and then we'll have a pretty good idea of what effects such things as acid rain has on plants - and the ways we can prevent the harmful effects of acid rain, such as using lime to buffer in a lake. One important thing you must know about this trip: it has to be done over a long period to observe the long term effects - therefore, we'll be meeting every day for about 5 minutes (probably

We'll be using between 12 and 12 plants, and doing 4 different situations (see illustration) - the

Reason for more than 1 plant in each category



is that only 1 plant wouldn't provide a reliable experiment - that plant might get sick & die because of other reasons.

Since we'll probably have lots of time left over, we'll also be doing other experiments - among them testing the tap water at south and also the marsh water that you all saw on the 1st day. Then if we have extra time we can hang out and play frisbee maybe - so bring a frisbee!

→ in the morning to water the plants and put more acid etc. on them!

Leaders: Rachel Kuller - 332-5932
+
Molly Smith - 965-1979
9 AM to 2 PM

EQUIPMENT:
Field Kit
+
Your unbridled enthusiasm
for the outdoors

TRIPSLIP #3
July 5, 1993

NATIVE

AMERICAN

Own
★
Design

There are many factors which affect the growth + development of natural areas. Understandably, man's influence is a major one. Today we will explore the impact of some of the first men & women to live on our grand and glorious continent.

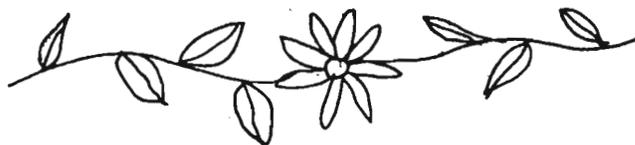
Rumor has it that the Nipmuck tribe was the group of native Americans which inhabited Newton. How do you think they stayed alive → that is, what did they eat?

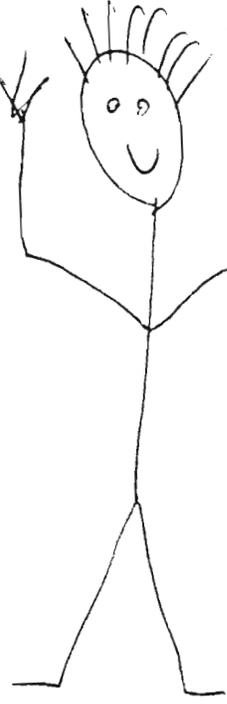
Hopefully we will dispel some of the myths about Native Americans and bring to light  many of the realities.

Native Americans had a profound respect for nature. Maybe we can capture that spirit and pay our own respects to the mighty force of nature.

"FOOD FOR YOUR FISH": The first white settlers came to Newton in 1630.

How did their arrival affect local environments?
How is this different from modern man's effects?





Mike's DOWN DESIGN

Trip slip # 4

7/6/99

place: Brown

Times: 9-2

Leaders:

Michael D'Zew

244-0285

Danny Yagoda

738-0269

Equipment: Sneakers (hiking boots not required), day packs, lunch, water, 1st aid kit, rain gear, pencil, notebook AND any hiking equipment that you have at home and are not sure of how to use. Hopefully if you bring it in, we will be able to figure it out.

O.k. my O.D., is a first time trial, so we'll see how it goes. We are going to be hanging at Brown, trying to figure out how to use a lot of camping and outdoors type equipment. We will be looking at things like backpacks (the best way to pack them) 1st aid kits (the best way to use 'em) knives (the best way to handle 'em) waterproofing solutions (the best way to use it), SW, ~~lighter~~ and anything else that you bring in, so yeah, hopefully this will work. Yippie.

Trip slip #8

7-12-99

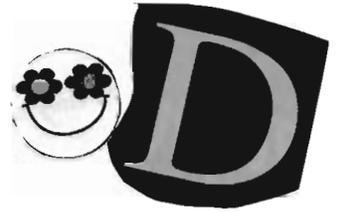
Leader(s): Gabe "Captain Planet" Yospin
969-3966

Times: 9-2

Place: BMS

Stuff: Fieldkit, power-pack
lunch, H₂O, paper +
pencils, thinking-cap
Sneakers.

G a B E'S



For tomorrow's trip, we won't ever go very far from the school. What we will do is play some awesome games, & build some ecosystems (yeah, that's right, we'll build ecosystems) & learn a lot.



Get happy (see dragon at left if you don't understand "happy").

So far as I can tell, here's the basic point of Environmental Science, & ESP: everything depends on everything. So we'll be learning exactly how different animals & species use each other, & how animals interact with their environments. I would ^{like} you all to start thinking about what animals eat other animals, & what animals eat plants, & what these animals do when they don't have enough food. What causes changes in population size?

For 7-12, Mon, I want everyone to list all the ways in which the following animals interact (write it or draw it):

- nitrogen-fixing bacteria
- decomposing bacteria
- star moss
- lichen
- grass
- cherry tree
- mosquito
- dragonfly
- bat
- mouse
- red-tailed hawk
- chipmunk
- woodpecker
- raccoon
- rocks
- dirt *

What are problems that people have with populations? Why are our problems different from those of other animals, or are they? I know that these are an awful lot of questions, & I promise that you will get answers on Monday, provided that you think hard over the weekend.

Cogito ergo sum...

* example: red-tailed hawks eat chipmunks, which eat cherries from the cherry tree that grows in the dirt.

Alex Kraus - # 964-7768

Danny Yagoda - # 738-0269

Trip slip # 2

7/2/99

Times: 9am - 2pm

Location: Meet @ Brown

Wiswall Woods

Wow, look, it's your first real trip. I hope you all enjoyed your first day. Next, we leave Brown in search of fame and fortune. Perhaps

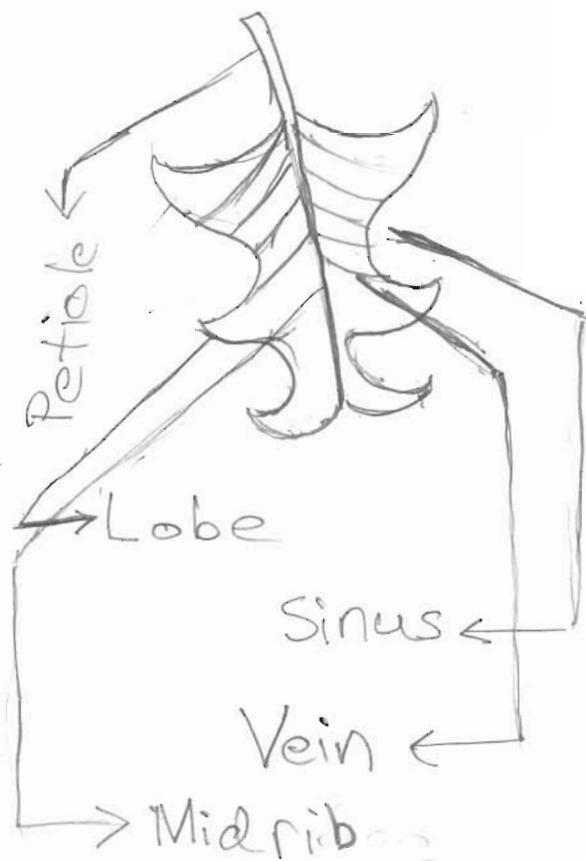
Okay, first order of Business: Getting there. To do this we will need to remember some of the map and compass skills we learned on the first day.

One nifty little tidbit of information about the program:

The students are responsible for mapping how to get to the location each day. Of course, the Leaders might help a little bit, but it's mostly up to you!

Hey! Things to remember: Declination, contour lines, scale, magnetic north.

PARTS OF A LEAF



? What does it take to be a Tree?

DRUMLIN

FARM BIKE TRIP!

Leader: Jon
Phone: 969-2051

Date: July 17, 89

Time: 9:00 - 3:30

Equipment:

bicycle 10 speed.
bicycle helmet
Field kit sneakers instead of boots
extra water
\$5.00

Today, we'll be riding to Drumlin Farm headquarters of The Massachusetts Audubon Society.

Drumlin Farm is more than just a farm. It's a sanctuary, where over 150 species of BIRDS have been seen, We will also see many wild and domestic animals common to Massachusetts can be found all through the Farm.

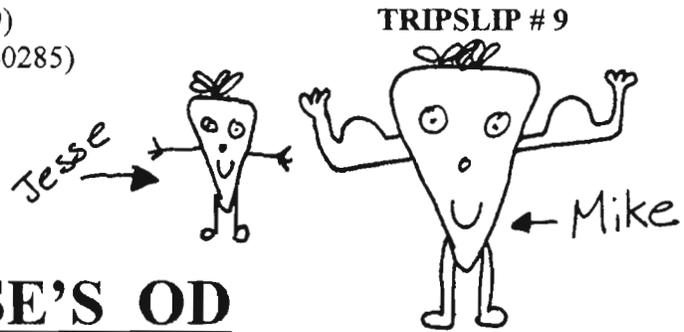
RULES of The Road

1. Ride in single file
2. Ride on the right side of the road
3. Use hand signals   

Leaders: Jesse, the big carrot (965-2719)
Mike the biggest carrot (244-0285)
July 15, 1998

Times: 8:30 AM - 3 PM

@ Brown Junior High



JESSE'S OD

Equipment: Backpack, lunch, H₂O, SNEAKERS, Field Kit, Bike, and helmet. bike tools if you have 'em, **markers and/or colored pencils, a clipboard or something hard to write on.** A 1 in x 1 in x 24 ft long rod of silly putty

Jesse: LET'S GET READY TO RUMBLE!!!!!!!!!!!!

Mike: Jesse, what are you talking about?

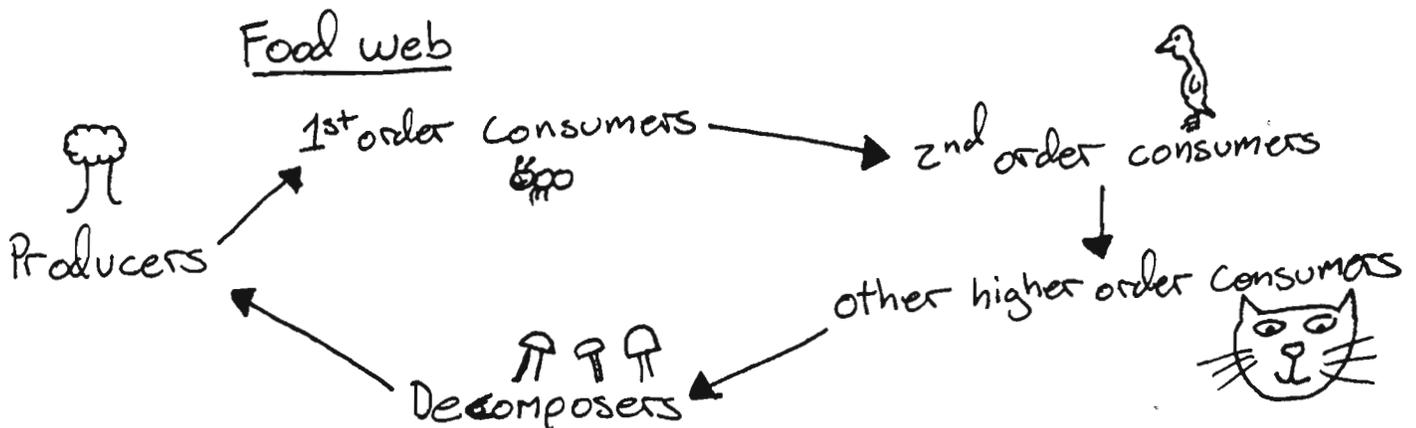
Jesse: Sorry, I just could not contain myself because I am so excited about my own design to Broadmoor wildlife sanctuary in Natick.

Mike: I know I'm psyched as well. I think I soiled myself.

Jesse: That's O.K. Mike. Hey students, hears the dilly. Tomorrow we're off to Broadmoor. We will be biking there, so I hope everyone remembers there bike safety, and signals. We'll go over it all in case you forgot. When we get to Broadmoor were going to do something fun, so remember your markers and clipboard. What is it that we're going to do? you ask. Well I'll let Mike tell you.

Mike: The fun thing we are going to do is..... psych, You're just going to have to wait and see. Here are some things to think about before this kickin' trip. What do different animals do to survive? What do they eat? How do they interact with the other organisms in their environment?

Jesse: Please try and be on time so we can get this party started right!!!! 🙌



Angela's Own Design

Leaders: Angela Simunovic (527-7993)
Alex Kraus (964-7768)

Date: Jul 13, '98
Time: 9-2

Trip slip #9
Meet at: Brown

Equipment: Day pack, field kit (First aid kit, etc.), water, lunch, and boots

My own design has two parts it involves a small and rather short trip and a crafts project. We are going to take a walk to Nahant (I know that is not how it is spelled, but it's the best guess I could make) park. There we are going to chill for a bit and after we get all rested we are going to make sun dials. A sun dial is an instrument that indicates local apparent solar time by the shadow cast by a central projecting pointer on a surrounding calibrated dial. In other words it is a device used to tell time solely by the sun. You are going to decorate the sun dials however you choose. I know it may sound a little lame, but trust me, it will be fun.

Sun dials have been around for centuries. They can be traced back to the Hebrew prophet Isaiah who may not have had a sun dial, but was aware of the general idea. In 300 B.C. a man named Berossus is credited with the development of the first sun dial. Since then many different variations and improvements have been made on the sun dial in order to perfect it.

I'm sure all of you have seen a sun dial before, but you probably haven't seen all the different varieties of them that there are. We are going to look at them and discuss how they work.

THINGS TO THINK ABOUT

- How does a sun dial work?
- How long does it take for the sun to make a complete rotation of the earth?
 - What other uses for the sun are there?
 - If the sun rises in the east and sets in the west what direction should 12:00 in the sun dial be facing

Haskell's Pond

Leaders: Angela Simunovic (527-7993)

Tripslip #10

Jeff Wong (332-3617)

Time: 9 AM-3 PM

Equipment: Day pack, Boots, Lunch, water, and your field kit

Haskell's pond can be found over by Lasell Junior College in Aburndale. A few years back the college was going to build a health center where the pond was located. To do this they would have to fill in the pond and destroy a great deal of the wild life there. The residents around the college fought the development and the pond was saved. The pond now is there for the animals and plants life and for us to enjoy.

The efforts of the residence saved the pond and that is what organizations like Greenpeace do daily. Greenpeace is an international environmental organization. The people in it work to change governments' laws and protect natural resources. Greenpeace protests and fights law and policies without violence. They go to the source. For example in order to protect whales people went out on boats and put their lives at risk by getting between the whales and the ships. Greenpeace as been loudly opposed and sometimes its members are killed, but slowly they are getting their point across to the world.

Back to ponds, do you know the difference between a pond and a lake? Well you see a pond has an outlet (a stream that flows out of ponds and lakes) and an inlet (a stream that flows into a pond) while a lake only has an outlet. So maybe when we are there we will be able to spot both an outlert and an inlet because Haskell's pond, in case you couldn't tell, is a pond.

Leaders: The coolest person on earth → Jeff Wong 332-3617

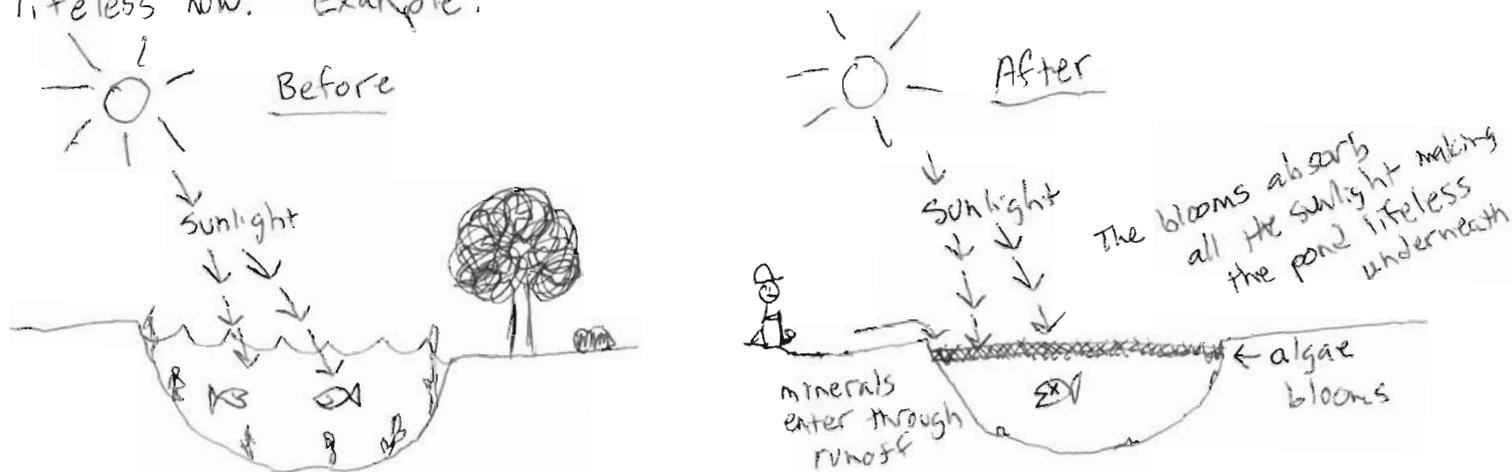
The 2nd coolest person on earth → Angela Simonovic 527-7993

Date: July 14, 1998 Times: 9-3 Trip/Slip #10 Meeting Place: Brown Middle School

Equipment: boots, wear 2 pairs of socks (1 thick like wool and 1 thin like cotton or polypropylene), at least 2 quarts of water, field kit, big lunch, sunblock, trip/Slip, a super turber booster and 29 frog legs, porcupine quills + honey mustard

HASKELL'S POND

How lucky you should feel since you're going to Haskell's Pond by Lasell College with me and Angela! Haskell's Pond is similar to Dolan Pond in that the pond is shrinking from the growth of emerging vegetation. On the way there, we'll pass a great example of eutrophication by the Brae Burn Country Club, a golf course. The pond is almost lifeless now. Example:



The opposite of eutrophication is oligotrophication. Oligotrophic lakes have very clear water and low biological productivity which means this type of condition would not support life well.

What is degradation?

- a) Barbie's cousin's name
- b) A special neon fruit that grows only in Timbuktu
- c) last night's jeopardy question
- d) another name for molay bread
- e) deterioration in water quality due to pollution

What's in our trash?

- 41% paper, paper products
 - 18% yard waste
 - 9% metals
 - 8% glass
 - 7% plastic
 - 8% food waste
 - 9% other
- National average in 1988

crown



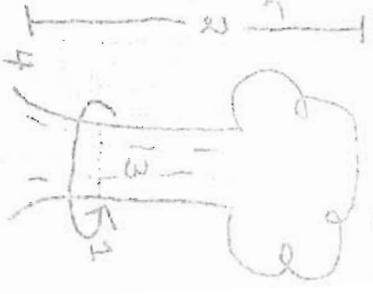
Mike Shen 4/14/00
 Date: July 2, 1999 Trip slip #2
 Times: 9am - 2pm
 Meeting Place: Brown Middle School

Equipment: boots, water, field kit, sun block, this trip slip, binoculars

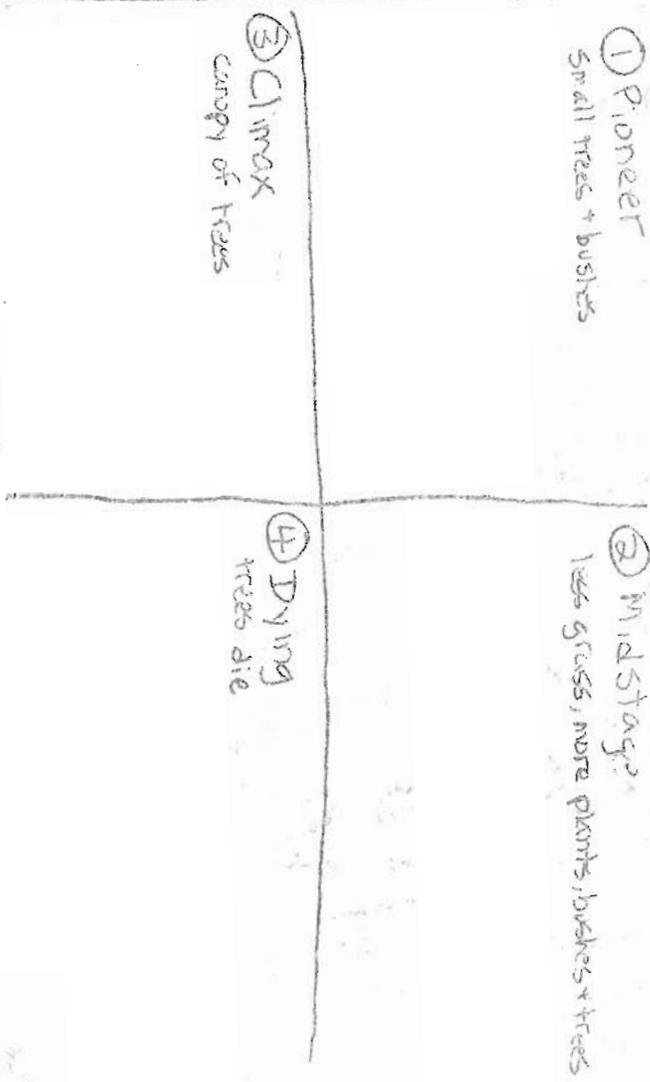
Your first real hiking trip with Envi-Sci will be to Wiswall Woods, a small forest located next to Mt. Ida Jr. College. There are several trails in the woods and we'll be able to see several swamp areas and the Charles River, as well. Several animals, especially birds, use the woods as their home. The adjacent wetlands area makes it an ideal place for birds to breed and raise their young.

FOREST SUCCESSION CHART

- tree or a tree?
- 1) trunk must be at least 3 inches in diameter
 - 2) should be at least 13 ft tall
 - 3) have a woody stem
 - 4) should be able to stand on its own



SUCCESSION is a series of orderly changes
 Wiswall woods is going through forest succession. There are 4 main stages of forest succession:



↑ We'll fill this chart in together when we get to Wiswall Woods.

WISWALL WOODS

← park

← roots

