



## Harvard LTER Schoolyard Program

---

Teacher Developed Lessons and Documents that integrate  
Harvard Forest Schoolyard Ecology Themes into curriculum.

- **Presentation Title:** The Bob Starr Vernal Pool
- **Description of Presentation:** Third Graders educate their community about their Vernal Pool.
- **Teacher/Author:** Sharon Jacobs
- **School:** South Area Solomon Schechter Day School
- **Level:** 3rd Grade
- **Subjects:** Science integrated with art, language arts and technology
- **Date:** April 13, 2011

## The Bob Starr Vernal Pool

3rd graders at the South Area Solomon Schechter Day School in Norwood, MA educate their community about their vernal pool



### Faculty:

Lisa Grossmann - 3rd grade Teacher

Julia Horowitz - 3rd grade Teacher

Sharon Jacobs - Science

Kathy Kats - Art

Daiva Navickas - Technology

Bracha Oren, Iris Rozenberg, Sarah Shay-Davidson - Hebrew



Slide Selected: 1/16



Zoom: 100%



Video: 0:07



Volume: 0:07



Project Info

Show Thumbnails



## Vernal Pool Introduction



It all started when SASSDS moved to its new home in Norwood, MA three years ago. While scouting the land around the school, enjoying the hills, woods and nature around us, we discovered, nestled in the woods, a vernal pool.

A year later we enrolled in the vernal pool program sponsored by the Schoolyard Ecology at Harvard Forest and coordinated by Pamela M. Snow.

The project inspired us to include the vernal pool in our environmental curriculum for both 3rd and 7th grades with the following goals in mind.





## Goals:

Educate students about watersheds, vernal pools and ecosystems and the importance of the vernal pool to the local biome.

Create an outdoor/indoor curriculum that integrates science, art, language arts and technology.

Promote awareness and critical thinking amongst students, so they will find their own ways to educate the community about the vernal pool and devise ways to protect it.



Science

Sketching on location

Slide Selected: 3/16

Next Info

Show Thumbnails

Exit

Done

On

75%

## Steps of the Vernal Pool Project

- Getting to know the vernal pool
- Learning about watersheds, biomes and ecosystems.
- Dedication of the vernal pool
- Devising ways to educate our own community
- Devising ways to educate the outside community



## Step 1: Getting to know the vernal pool

- Seasons
- Part of a watershed
- Measuring and mapping the vernal pool
- Part of an ecosystem
- Abiotic conditions
- Biotics -its habitants both plant and animal Include pictures and examples of students work: Art drawings, science drawings, field notes and collected data



### Harvard LTER Schoolyard - Vernal Pools

School Name:	SOUTH AREA SOLOMON SCHECHTER DAY SCHOOL					
Teacher Name:	SHARON JACOBS					
Grade Number:	3					
Class Name:	NA					
Site Description:	VERNAL POOL LOCATED BETWEEN OUR PARKING LOT AND STOP & SHOP PARKING LOT 1 COMMERCE WAY NORWOOD MA					
Date	Dmax	Diameter	Depth	AirT	WaterT	
9/13/2010	81.6864 M	NA	NA	20 C	NA	
11/22/2010	81.686	14m, 10cm	10cm	10c	5c	

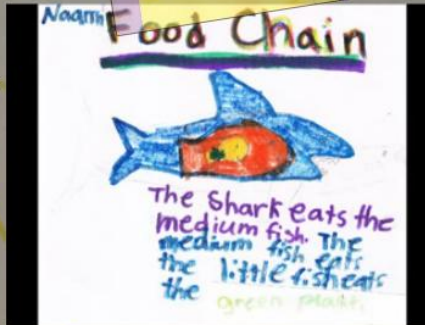
Slide Selected: 5/16 Zoom: 100% Video: 1:13 Volume: Project Info Show Th





## Step 2: Watersheds and ecosystems

- What is a watershed
- What is an ecosystem - food webs and food chains.
- Science: The students read fiction and non fiction books in groups, created posters and wrote their ideas on food chains and food webs.
- In small tanks, the students created models of the vernal pool, using water from the pool itself. Half of the models were contaminated with trash found in our pool (Coke, oil, plastic bags) and tested the effect of contamination on the biotics and abiotics of their models.
- Language arts: the students read and watched the Lorax (by Dr. Seuss) and created food webs based on the book.
- Art: The students drew pictures of Salamanders and dragon flies based on the art of several American painters.



Slide Selected: 6/16



Zoom: + 100%

Video: ||

0:55

Volume: |

Project Info

Show Thumbnails



### Third Grade Vernal Pool Experiment

Team:

Liza and Naamiah

The variable that we tested was:

Water Quality

In our initial observation, before starting our experiment, we saw these organisms with our naked eye:

a yellow thing  
a long stick like thing - a oregy Redist

We saw these organisms when using our magnifying lens:

circle  
(my fit) Pantom midge Springtails

Other observations of both biotic and abiotic factors:

my fly, pantom midge, and spring tails.



We began our experiment. After several days we examined our vernal pool water again.

We saw these organisms with our naked eye:

We saw these organisms when using our magnifying lens:

Predaceous Diving Beetle



Other observations of both biotic and abiotic factors:

Predaceous Diving Beetle, Dust

Slide Selected: 7/16



Zoom:



100%

Video:



0:00

Volume:



Project Info

Show Thumbnails

Exit



## Step 3: The vernal pool dedication

- In order to register the vernal pool the students needed to officially name it.
- They chose to name it after our volunteer of the year, Mr. Robert Starr
- Show pictures from the dedication, newspaper articles, and students letters to Bob Starr



Slide Selected: 8/16    Zoom: 100%    Video: 0:31    Volume:    Project



## Step 4: Educating our community

- Students brain storm on ways
- Students divide to task forces
- Posters, pins and letters are made
- Work is presented to younger and older students and teachers, as well as the parent community
- Students met their younger and older peers and shared with them their finding on the vernal pool.
- Sign were put by the vernal pool so parents and visitors of the school can be aware of the vernal pool and visit it.
- Teachers were invited to the art exhibit of the 3rd graders (dragon flies and salamanders) and heard explanations on the vernal pool.



South Area Solomon Schechter Day School

1 Commerce Way

Norwood, MA 02062

Dear Schechter Community,

We are Third Graders at the South Area Solomon Schechter Day School. There is a vernal pool on our school property. A vernal pool is a place that fills up with water from rain and melted snow in the spring and then dries up in the summer. We do not want people to pollute the vernal pool because the animals that live there might die. We want out there to look at it and draw what we saw in our sketch pads. Animals live there such as salamanders, frogs, toads and bugs, and have their babies there in the spring. We want to save the vernal pool and we hope that you will help too!

Sincerely,

Rayna Tallano, Dahlia Ardizzone and the 3<sup>rd</sup> Grade Class

Slide Selected: 9/16



Zoom: 100%

Video: 0:35



Volume: 75%

Project Info

Show Thumbnails

Exit



## Step 5: Educating the public

- Students go to the parking at Stop&Shop that borders the vernal pool.
- Prior to the visit the students created posters and pins that included scientific facts about the pool, the pollution and the desire to protect it.
- The students brainstormed, designed and wrote fliers to be handed to the customers.
- In Language arts the students were taught how to write an official letter. The students then typed a letter to our school newspapers and to the local one.
- Students went to the Stop&Shop parking lot (with the permission and blessing of the store's manager Mrs. Marianne Astuccio). They stood with their posters, handed out fliers and explained to the customers about the vernal pool and the need to stop polluting it.



Slide Selected: 10/16



Zoom:



100%

Video:



0:51

Volume:





- The 3rd Grade class became knowledgeable about the important role that the vernal pool plays in the watershed and the ecology of our area
- They used their new awareness to educate the community about ways to conserve this important natural resource
- Our 3rd Grade students at the South Area Solomon Schechter Day School will continue to be stewards of the vernal pool by continuing to collect data for the Harvard Forest study. They will also continue to advocate for the care and conservation of the vernal pool, by our school and the larger community

C. 018      Revised From Schedule of Events  
General Post Check-out/In/Info Student Info Sheet

Name: \_\_\_\_\_  
 School: SOUTH AFRICA      Number: \_\_\_\_\_  
 Class: Grade 3      Grade: 3  
 General Post Name: Ben Smit Vernal Pool  
 Date: November 23, 2011      Time: 9:30 am

Minimum Insects	General Insected	Water Depth (approximate)	Temp (approx)	Water Type (Fountain)
_____	_____	_____	_____	_____

FIELD NOTES  
1. Spent 10 min. in the pool.  
2. Spent 10 min. in the pool.  
3. Spent 10 min. in the pool.  
4. Spent 10 min. in the pool.  
5. Spent 10 min. in the pool.  
6. Spent 10 min. in the pool.  
7. Spent 10 min. in the pool.  
8. Spent 10 min. in the pool.  
9. Spent 10 min. in the pool.  
10. Spent 10 min. in the pool.

Type equation e.



Carla

Harvard Forest Schoolyard Ecology  
Vernal Pool Characteristics Student Data Sheet

Name(s): Carla

School: South Area School Teacher: Sharon Jacobs

Class: 1st/2nd Grade: 3

Vernal Pool Name: Bob Starr Vernal Pool

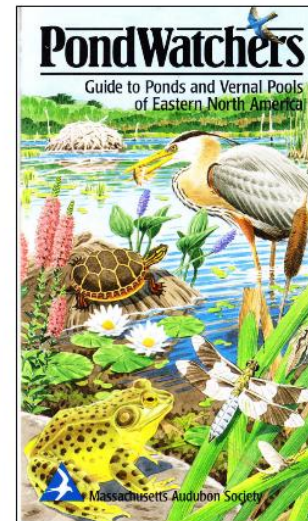
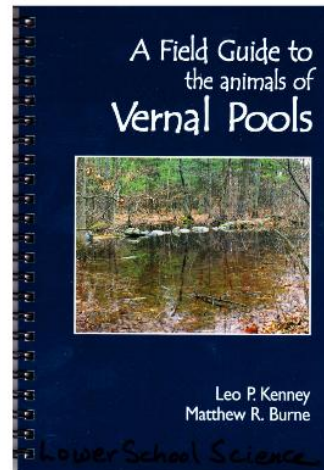
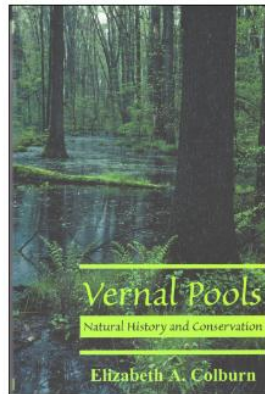
Date: November 23, 2010 Time: 9:30 am

Maximum Diameter (meters)	Current Diameter (meters)	Water Depth (centimeters)	Air Temp. (Celsius)	Water Temp. (Celsius)
	<u>4.10</u>	<u>10</u>	<u>10</u>	<u>5.5</u>

FIELD NOTES

I see a lot of water there. It is clear to me. The water is not very deep. There are a lot of lily leaves on the ground. I can only see plants like the trees. We saw a small frog. It was green and it was very cold. The water was very cold. I saw a lot of leaves and a lot of water.

## Bibliography

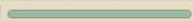


Slide Selected: 12/16



Zoom: 100%

Video:



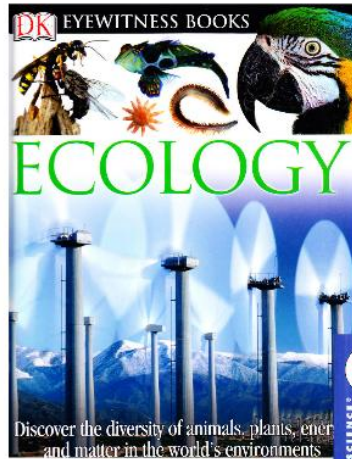
Volume:



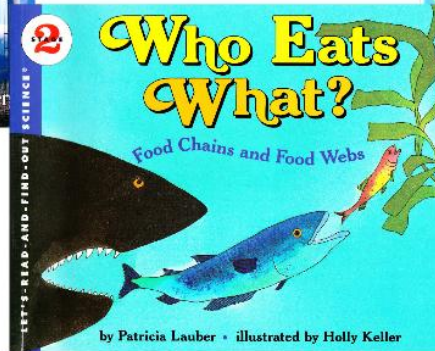
Project Info

Show Thumbnails

Exit



## Bibliography



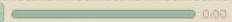
Slide Selected: 13/16



Zoom: 100%



Video:



0:00

Volume:



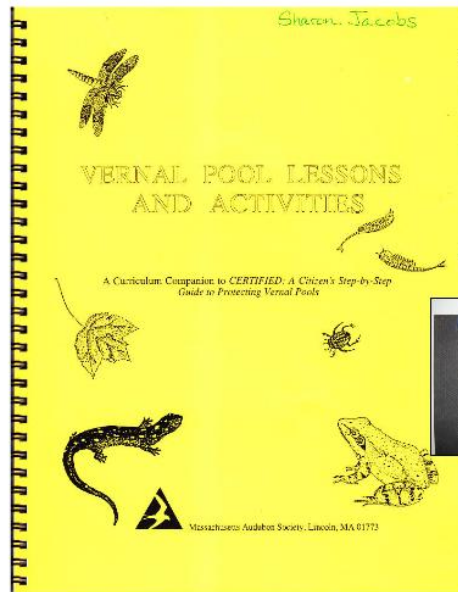
Project Info

Show Thumbnails

Exit



## Bibliography

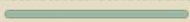


Slide Selected: 14/16



Zoom: 100%

Video:



Volume:



Project Info

Show Thumbnails

Exit

## Bibliography

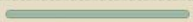


Slide Selected: 15/16



Zoom: 100%

Video:



Volume:



Project Info

Show Thumbnails

Exit

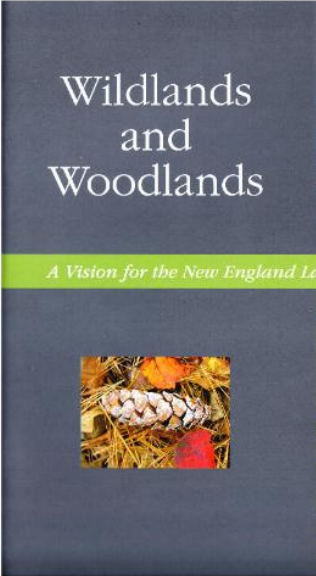
Disney's Planet Challenge - Internet Explorer, optimized for Bing and MSN


http://dpcproject.com/Portfolio.aspx

# Bibliography

Wildlands and Woodlands

A Vision for the New England Landscape





Slide Selected: 16/16

Zoom: 100%

Video: 0:00

Volume: 0.00

Project Info

Show Thumbnails

Exit

Done

Internet | Protected Mode: On

75%