

# **A Conservation Project between the Town of Deerfield Conservation Commission (DCC) and the Deerfield Community School (DCS)**

## **Maintaining Biodiversity & Ecosystem Services in Deerfield's Town Forests**

### **Summary of work:**

#### Overview:

Middle school students (seventh and eighth graders) at DCS supported the community familiarizing themselves with two Deerfield Town Forest properties and performing a biodiversity inventory of the wildlife and vegetation. In addition students assessed each property to see if there was some way that they could improve on the property and develop a solution for each.

#### Details:

At the beginning of the school year, students learned about ecosystems and biodiversity. They spent time in the forest behind our school and created tree guides. Then in the fall, students inventoried the vegetation of 2 different town properties with the help of their past experience, and the app iNaturalist. Students then determined the international MUC codes for the different habitats within the two town properties.

Students then learned about the various different types of wildlife that live in our forests. Based on this information the students predicted the type of wildlife that might use these properties based on the vegetation that exists. Later in the winter, students performed tracking when the land was covered with snow, and gathered data on the type of animals that used the properties.

The students also learned about different types of human impacts that might affect the ecological services of habitats such as invasive species. The students brainstormed any impact that might be affecting their town property or a way to improve on the ecological services at the site. Each class then voted on their top 3 choices and these ideas were brought to the conservation commission to get their input. It was decided that students would clean up the trail at Dowst Cate. It had been recently logged and there was a lot of debris on the ground. The students felt that this debris made it hard to walk the trail. At Lyndsey Flanders, the students wanted to add a trail sign at the beginning of the trail. There presently wasn't any markers on the site and most students didn't know it existed, even though it was behind the town ballfields. In addition, they wanted to put up signs identifying trees and features along the trail. A field trip was arranged for the entire 7th and 8th grade. Three classes went to Dowst Cate and cleared the trails and 2 classes went to Lynsey Flanders to clear the trail and put up signs. Afterwards, the students came back and we had an ice cream social on the front lawn outside of the school.

### **Financial Statement**

Activity	Cost
October trip to town property (bus cost)	\$75/class 5 Classes Total = \$375
February trip to town property	\$75/class 5 Classes Total = \$375
May trip to town property	\$75/class 5 Classes Total = \$375
Celebration (ice cream social)	\$100

**Total budget: \$1125**

**Source of funds :**

\$600 NHACC grant money (\$500 student transportation and \$100 celebration)

\$500 NHACC commission stipend will be put toward student transportation. *Note: the Deerfield Conservation Commission voted at their August meeting to give all the stipend money to the DCS to help defray costs of the project.*

\$125 school budget (additional transportation cost)

**Staff time:** Each trip to the forest involved 90 minutes. There were typically 6 adults present (I usually had 2-3 parent volunteers on each trip). The final trip utilized 13 staff members from DCS for 150 minutes of work and then came to the ice cream social.

**Lead teacher time:** About 10 hours at each site in preparation for all the trips. Countless number of hours preparing lesson plans to get students ready for trips to the sites and to teach the ecology concepts.

**Results and Impacts of the Project**

107 students participated in this project. Students learned about ecosystems and how humans can impact them. Most students had little knowledge of tree species and learned how to identify the common trees in our area. In addition, I found that while students knew about animals such as foxes, deer and coyotes, they didn't know about weasels, mink, and many of the smaller species like moles and voles. They really connected this information when we went tracking and found evidence of some of these animals.

The students also learned about the conservation commission and what they do. We had one member come into each class and he talked a little about the commission. We also were able to have students meet another CC member at one of the sites because she was conducting research for UNH on decomposition at this site. I think the activity the students enjoyed the most, however, was learning how to track. Many students cited this as their favorite activity when we had our curriculum night in the spring.

About 10 parent volunteers helped out throughout the course of the year. This was really great because it is often difficult to get parent volunteers when students reach middle school. Many didn't even know about our town properties so it was a great learning experience for them as well.

**Lessons Learned and Unexpected Challenges:**

I learned a lot about taking students out into a forest that wasn't our school property. While I typically take my students out a lot, we usually work in one big group, or at least close enough that I can see each group. Working on the trails, however, I had to split up groups so we could get as much ground covered as possible. It was always a challenge to communicate with each group, and get back to the bus on time, so they wouldn't be late for their next class.

Unfortunately, the international connection that I had originally planned didn't work out. The teachers in Germany and Finland decided they were too busy to collaborate on the project. I would have also liked more connection with the conservation committee but it is very difficult to work this out, especially since I had 5 different classes.

Lastly, the weather was not very cooperative for putting out the trail cams and tracking. You can't just decide in the morning that you are going to go out tracking. The bus needs to be reserved and parent permission slips need to go out. Because of this, the weather wasn't always the best for tracking.

**Sustainability Plan:**

Unfortunately, I decided to retire a year early this December, so I will be unable to continue this program myself. However, I am willing to help continue a partnership with the school and the Conservation Commission as a volunteer. This will depend on the openness of my replacement.

I hope that environmental education will continue at the school. During my time at DCS, two outdoor classrooms, numerous gardens and trails throughout the woods have been created. I developed a science team that includes one lead teacher from each grade level, and I know that they have been working on environmental education in their own classrooms.

Pictures of students:

Habitat Identification:



Tracking:





## Town Property Projects:

