

# Deer Creek School

## Environmental Education Project

### FINAL REPORT

June 1999

Deer Creek School's Living Classroom project is alive and well! Our first project with Metro is complete. Following is a summary of activities on how the project was completed, and comments about each part.

PATHS AND LEARNING STATIONS: We have installed gravel paths through our woodlands area, with 7 specific areas for study so far. These include:

- 1) Bioswale - What is it?
- 2) Bioswale - Water Quality Testing
- 3) Decomposition
- 4) Feeding Station
- 5) Listening Station
- 6) Reflection Station
- 7) Comparison of man-made and natural wetlands and woodlands areas

Paths were laid with volunteer labor crews from the Washington County Work in Lieu of Jail program over several weekends. These work crews were for the most part, quite reliable and appeared to enjoy working on a project that students would benefit from. Several individuals from this crew seemed to take a special interest in this project and offered excellent ideas and took the initiative to see them through. For example, one individual who worked for a tree trimming business recommended trimming trees and snags that were over the paths in interest of student safety. He brought his own equipment and completed the job in a professional way. Other identified plants that were in the pathways and replanted them in other others.

This was an economical way to get a large project done. It did call for staff to work 7 days a week for several weeks to allow the building to be open and provide direction for the crews. In the future, we would probably try to spread the project work out over a period of several months instead of several weeks in order to keep staff energy levels high and prevent burnout.

STAFF TRAINING:

All staff have participated in the Project Wet training. Teaching materials and supplies have been organized into bins by station with cross grade level activities planned and organized for the bins. In addition to activities these stations were specifically situated for, we are pleased that staff have developed additional activities to meet district and state curriculum benchmarks.

We have also devoted one of our four staff training days over the last 2 years to train staff on new ideas and strategies to use the woodlands and wetlands. Staff have been enthusiastic about their participation in these, and they have resulted in increased usage.

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ACTIVITIES with STUDENTS:

HABITAT: We have offered 4 after school projects to students in the past year and a half. These programs, called HABITAT are designed to teach appreciation and stewardship of the our environment in a hands-on way.

BIRD AND BUTTERFLY GARDEN:

The first HABITAT group started with 14 students and swelled to over 30 before the end of the session. Students were charged with researching, designing, and planting the Bird and Butterfly Garden. In the process of planning the garden, students did soil testing, researched what plants were already in the area, measured the area, researched animal and habitat needs identified how to provide that, and created a planting plan to accommodate those needs. Plants were purchased and students planted the garden. Students also made wild seed mats (to take home) and bird houses which will be placed in the woodlands in the fall. Students have also planned and delivered 3 "events"; students created an assembly to "kick-off" the planting of the butterfly and hummingbird garden (with Mike Burton), they presented to the Wildlife Steward Program, and they presented to the Metro Environmental Education grants group. They came home with a Gold Seal Award!

This garden is maintained during the school year by students and over the summer by families that sign up for a week at a time. Maintenance work also includes writing in the journal about habitat and wildlife observations.

WATER CYCLES:

The second HABITAT group was designed to teach about water cycles, feeding, and small critters like bats. This project welcomed over 40 students. Many students who were not involved in the previous HABITAT joined. We worked to capitalize resources in our Bird and Butterfly Garden. Students did extensive "tours" of the garden to observe - how many different leaf shapes are there, do any plants have flowers, fruit - what does it look like, any critters around, etc. They worked on plant identification, botanical drawings, and bark and leaf rubbings. They engaged in "book research" as well, and researched information about the plants--- How big? Flower? When? What did the Native Americans use the plant for (if applicable)? What wildlife does the plant provide for? They worked in teams of 3 or 4, young paired with older students. We wanted a hands-on way for the kids to see what changes have happened in the garden, to become more familiar with the plants they chose and for the new kids to feel a part of it, too.

SEED:

The third HABITAT group was open only to 4th and 5th graders. This project was dubbed SEED for Science, Experiment, Evaluate and Document. Work was designed around around the scientific inquiry model, a state science benchmark for 5th grade. Students designed an experiment, learned scientific terms like hypothesis, data, analysis, documentation, and evaluate. Students planted a variety of seeds and monitored growth under 3 variables: a control group, a group that had adequate water, less light, and a group that had less light and adequate water. A volunteer purchased materials and built a growing rack and loaned it to the school. Students then worked with a graphic artist (another volunteer) to create their display. The work was displayed at the school Science Fair then shared at the Wildlife Stewards Program presentation where our students came home with another Gold Seal Award! A highlight of this program was a visit from Craig Tufts, Chief Naturalist with the National Wildlife Federation. We were honored to have Craig visit with our students, inspire them, and meet with other project organizers for almost 2 hours.

This group also had the opportunity to participate in a video production with 4-H about the National Wildlife Federation programs. They filmed at Deer Creek School and students prepared talks about their experiences.

#### WETLANDS AND WOODLANDS ACTIVITIES:

We have just completed the 4th HABITAT session. We turned students away after reaching 63 registrations. Activities included teaching observation skills through "Sound Map/Camera" where student pairs alternated between listening and locating sounds in nature and viewing items in nature and recording information. Students also worked with a guest on a mushroom hunting expedition, and making spore prints. For the third session, another guest taught about bees. Students examined bee specimens and bee nests. Students built bee nests. For the next session, students participated in a Plant Safari. Each student observed their plant (height, color, etc) to help id the plant. Teams worked together to id the plants and wrote a journal page about their plant, including what it was and a determination of its habitat value. The plant specimen (leaf and flower) was pressed, sealed in clear contact paper to add to the child's journal page. The next session included a Wildlife Safari. This included instructions on how to check for "wildlife" activity - ie, tracks, nests, actual sightings, etc. Students watched for signs of animal, insect, etc activity - and then recorded on their journal page what they found and what could be done to improve habitat value.

These HABITAT experiences utilize parent and community volunteers to organize and execute. They are scheduled for 6 weeks, one day a week. We have extended the time from 1 hour to 1 and 1/2 hours. They have brought many valuable connections to the school as well as provided meaningful and fun opportunities for our students to learn about good stewardship of our environment. Although we have done this 4 times, we feel we are still in the infancy of this program and have many more ideas to develop.

We have secured family volunteers to take care of the butterfly and hummingbird garden for a week at a time over the summer. Their responsibilities will include checking health and condition of plants, weeding, deadheading any flowers, and recording observations in a journal.

It became clear to us that one parent volunteer could not manage the number of students who wanted to be involved in this program. We were able to secure 2 community volunteers (who don't have children in our school)---1 Senior citizen neighbor who is also a master gardener, and 1 newly trained Wildlife Steward. These volunteers have worked with our parent volunteer and the principal to design the activities, secure materials, and to each work with smaller groups of students.

While these activities have been very popular with our students, because of numbers of students, our volunteers feel a need to apply a criteria for participation. They are working on this.

#### SCHOOL WIDE ASSEMBLIES:

We have held several school wide assemblies to celebrate the progress of our work and learning about our woodlands and wetlands. For these assemblies, our music teacher has coordinated music and student performance.

#### OTHER:

This project has been a great springboard for community partnerships for Deer Creek School. In addition to our work with METRO, we have become affiliated with Wildlife Stewards, 4-H programs, National Wildlife Federation, Diack Foundation, Project Wet, George Fock University,

Washington County Work in Lieu of Jail, and a variety of community businesses who have consulted with us on these projects. We are just in the beginning stages of capitalizing on these and are anxious to continue and expand our relationships.

#### FUTURE PLANS:

Staff will continue to refine activities to meet science and other curricular areas. One "dream" that several staff members and volunteers have talked about is to refine the curriculum and to stock "station bins" to promote ease of use for staff and volunteers. We are in the process of working on this and hope to be able to open this area and our bin system to other schools for a small restocking fee.

We have an interest in planting native flowers and plants on the bioswale. We would like "signage" out at each station. We would also like signage indoors in the lobby leading to our Bird and Butterfly Garden to identify it as a student developed area, along with our stewardship goals.

We also have an interest in raising salmon or trout from eggs for release. One idea is to have this be part of our HABITAT in conjunction with classroom participation. We will seek grant funding to acquire the necessary materials for this.