



Rain Garden

By Margaret Paul

Environmental Club & Horticulture Classes Towson High School, Baltimore County
mpaul@bcps.org

At the beginning of the school year, five trailer classrooms were delivered to the Towson High School campus behind the main building. After their installation, the disturbed grounds around them pooled excess water, due to the soil's clay base. To prevent potential problems from occurring, the Towson High School Environmental Club and horticulture classes mapped out the land involved and chose and planted perennials - both plants and shrubs - that would utilize the pooled water. In one particular area, down spouts seemed to be an issue. That area became the "rain garden." Prior to planting, faculty members used a rototiller to turn up the soil so that club members and horticulture classes would then be able to mix the clay base soil with mulch and compost. [Best practices:](#)

Best Practice 1: What recognized community need was met by your project? Not only was this an educational experience for our students, it also met the need of our school community. The pools of standing water would have eventually caused erosion and silt was getting into area storm drains. Students sought solutions to this problem and determined that the excess water could be absorbed if mulch was laid on the ground and various perennials were planted. Obviously, the pooled water surrounding the trailer classrooms was an issue. The cloudy water in the Herring Run alerted us to the fact that sediment was running into the stream. The communities down the stream were helped by our project, as well the aquatic community in Herring Run.

Best Practice 2: How was the project connected to the school curriculum and curricular objectives? Horticulture students learned the qualities of different soils not only by reading from texts, but also from actually handling the clay soil and mixing mulch and compost. These students, as well as members of the Environmental Club, planted various perennials and shrubs. In doing so, they realized that when they dug the ground to do plantings, the depth of the hole had to be as deep as the potted plant and its width was double the size. They also learned that mulching would help ensure appropriate moisture for the newly planted garden. The project enhanced academic learning as well when students observed how mixing mulch into the clay base provided oxygen that is necessary for the roots of the plants to grow. The horticulture students, using skills they had learned in class, chemically tested the composted material. They learned that they were feeding the young plants nitrogen, phosphorous, and potassium.

Best Practice 3: How did participants reflect on their experiences throughout the project? Students engaged daily in discussions at the beginning of each horticulture class about the objective for the day and the progress of the project. Environmental Club members completed written reflections.

Best Practice 4: How did students take leadership roles and take responsibility for the success of the project? The teacher, Ms. Paul, set up guidelines for the group leaders and from there, the students accomplished all that was assigned. Upperclassmen were put in charge of groups. They were given diverse tasks to complete and they all stepped up to the challenge of engaging every student in the work that was to be done.

Best Practice 5: What community partners were worked with on this project? The Herring Run Watershed, represented by Darrin Crew, helped the group by discussing why the project was needed with the Environmental Club. Mr. Crew also provided his assistance on scheduled planting days. The Chesapeake Bay Foundation awarded \$2000.00 towards the purchase of most of the perennials and shrubs. The Towson High School PTSA also granted funds that were used to purchase planting tools and more plants.

Best Practice 6: How did you prepare and plan ahead for the project? Every student was engaged in multiple tasks throughout the project. Some measured the plots for planting, others determined what perennials were native to the Chesapeake Bay area, and still others designed a layout for the six diverse plots. Mulch and manure (composted horse waste) were arranged for delivery to the school grounds; plants were ordered from a local horticultural greenhouse; grants were applied for and received, and a schedule was created. All of the preparations and plans for the project were student-initiated, with little guidance from adults.

Best Practice 7: What knowledge and skills did students develop through this project? The motto for this project was, "plan ahead and think about what could go wrong." In addition to all the information stated above, the students have realized that their rain garden and other plots require daily maintenance in order for the plants and grounds to survive. Students really enjoyed participating in this project and learned a great deal about the health and maintenance of the environment and their responsibility for keeping things like area streams clean.

