Project Summary Form

Project Title: Habitat Education Project (Habitat Education and Maintenance/ Conservation)

School / Organization and Teacher / Leader's Name: Stonehouse Elementary School; Project Leaders: Jan Newton (parent volunteer)/ Julie Martin (teacher)

Project Outcome (Lessons learned, successes, results, number of youth involved, etc.):

Educational posters, charts and pages from wildlife magazines were purchased and displayed on the Habitat Educational Wall to enhance the learning of such topics as butterfly, frog and plant life cycles, habitats, animals, plants, conservation and other SOL topics. These wall hangings were laminated and hung using hot glue, allowing for easy removal from the wall and for use in future years. A bird bath and additional gardening equipment and supplies were purchased as an effort for the Stonehouse Elementary School Habitat to continue providing for wildlife and to better accommodate the students in hands-on learning and for maintenance and upkeep of the habitat area.

Habitat Helpers are groups of 2nd, 3rd and 4th grade students who gave up their recess once or twice a month on a rotational basis to help parent volunteer Mrs. Newton in the Habitat. Habitat Helpers learned about native plants, habitats, conservation, and other environmental topics as they plant, weed, mulch, prune and help with other tasks in the habitat. They also helped dig and pot seedlings for further propagation and sharing with the community. The students learned first hand about the benefits of compost, mulch and using native plants. Habitat Helpers were joined by other students, faculty and parent volunteers for the mulching of the habitat near the end of the school year.

Not only does the Stonehouse Habitat aim to enhance learning, but also strives to help with erosion, conservation, preserving wildlife, and filtering water before it enters the Chesapeake Bay Watershed, as well as to foster an awareness of the environment and strengthen relationships among students, faculty and the local community. The Stonehouse Habitat is located in a courtyard of the school and is easily accessible to all, including those in wheelchairs. About five years ago when the habitat was being installed, donated compost was tilled into the mostly clay soil to add nutrients and allow the soil to better retain moisture. Donated mulch was applied to conserve water and help reduce the amount of erosion in the area. Plants were strategically placed around the two-foot square drain and throughout the garden to help soak up and filter water, as well as to keep mulch and dirt out of the drain. Virginia native plants were used because they are beneficial to native wildlife and, once established, use less water and pesticides

than exotic or non-native plants. Organic pesticides such as a home-made version of Safer's Soap and natural fungicide are used sparingly.

We have added several native species to the Habitat over the year, including Jack-in-the-pulpit, jewelweed, netted chain fern, royal fern, and lyre-leaf sage to name a few. We raised a spicebush swallowtail caterpillar on one of our spicebushes last summer and this summer the spicebush provided food for eight spicebush caterpillars. Currently the Habitat is home to several baby rabbits, lots of ladybug larva and adults, black swallowtail caterpillars, tree frogs, a toad, praying mantises, nesting barn swallows and an English sparrow family nesting in the bluebird house.

Over the five years, the Habitat has had 20 bird's nests and has been home to countless numbers of black swallowtail and monarch caterpillars, toads and tree frogs. Butterflies, ladybugs, praying mantises and many other insects have also been living in and feeding in the Habitat. Two years ago bluebirds raised their young in one of the bird houses. In addition, fritillary caterpillars have fed on passionflower vine and birds have been enjoying the newly installed bird bath and have been eating winterberries, service berries and various seeds. As the plants in the Habitat keep maturing and growing, we expect more and more wildlife to visit or take up residency.

The Habitat makes learning about wildlife and the environment a fun and memorable experience.

If applicable, how many volunteers participated and for how many hours did they volunteer?

Second, third and forth grades students participated on a rotational basis during their 20-minutes recess as Habitat Helpers throughout the year. Mrs. Newton (parent volunteer and Virginia Native Plant Society member) guided and taught the students while they were helping in the Habitat and she volunteered on average 3-7 hours a week during the school year and about 4-6 hours weekly during the summer. Six additional native plant society members volunteered 6 hours each. Many hours were spent the last couple weeks of the school year weeding and applying 26 cubic yards of mulch (at least 7 groups of 6-20 students at a time, plus a faculty member for shifts of 20-60 minutes; two parent volunteers each spent 20 hours mulching and adding edging).

What did the students enjoy the most of this project?

Some students liked mulching (parents wonder why they won't do this at home!), others liked weeding, while other students enjoyed pruning. All loved learning about bugs and what parts of the plants serve as food sources for particular wildlife. Younger children are thrilled to walk through the Habitat on the stepping stones and cross over the small bridge. Some students commented that their favorite thing about the Habitat was seeing the caterpillars and their chrysali. Many are amazed to discover that ladybugs have a similar life-cycle to that of butterflies. This year many classes were extra quiet when walking through the Habitat in hopes of seeing the baby bunnies. A couple of students said that their favorite part was seeing the bunny nest (burrow) under some plants. One student said that they really enjoyed going to the Habitat to check the rain and temperature gauges for science class. The photography club enjoys taking pictures in the Habitat. Language Arts classes use the Habitat for writing inspiration. All enjoy the beautiful flowers and greenery.

How could a similar project be improved? (Lessons learned, etc.):

If more adult volunteers were available during recess times, more groups of students could participate at the same time. Planning and scheduling a mulching/work day well in advance and getting it on the school calendar would help to ensure that the mulching gets done in February or early March before new growth and seedlings emerge in the spring. We discovered the safest way to mulch with a group of children is to have them turn a medium-sized plant pot sideways and use their gloved-hands to scoop the mulch into the pots rather than having them possibly poke each other while using rakes and pitch forks. Then the mulch is emptied into the wheelbarrow. For transporting the mulch throughout the habitat, fourth and fifth graders could manage only a half-full wheelbarrow of mulch at a time. Two or more wheelbarrows are helpful for this task. Adults are best at spreading the mulch to ensure an even, 3-inch layer. Adults and older children are best at carefully spreading the mulch under plants, making sure leaves are not being covered with mulch.

Please include copies of your receipts, any photos, materials, or program information available on your mini-grant program. Pictures received could be displayed on the websites.

Please fill out and mail or fax to HRPDC, Attention: HR Green Mini-Grant, 723 Woodlake Drive, Chesapeake, VA 23320, FAX: (757) 523-4881 *Thank You!*

Your completed and returned summary form will be submitted for consideration for the Project of the Year Award. If selected your project will be recognized at the regional environmental education conference.

Stonehouse Elementary School
3651 Rochambeau Dr.
Williamsburg, VA 23188

Jan Newton 757-566-3646

Stonehouse Elementary School Habitat

Habitat Education Project

2008-2009

(HR Green Mini-Grant Program)

Receipt Info for Budget Items

-School Crossing	(charts and bulletin board sets)	$ 56.90
-Wal-Mart	(non-toxic, organic pesticide & fungicide materials)	$ 7.97
-National Wildlife Federation	(2 subscriptions to magazine)	$ 39.90
-Lowe's	(bird bath, pump sprayer, gloves, stakes)	$110.26
-Lowe's	(glue gun & sticks)	$ 20.94
-Lowe's	(glue sticks, pruners, & trowels)	$ 30.39
	Total	**$ 266.36**

Please Note:
HR Storm's Mini-Grant was for $250 *(project went over budget by $16.36)*

Stonehouse Elementary School
3651 Rochambeau Dr.
Williamsburg, VA 23188

Stonehouse Elementary School Habitat

Habitat Education and Maintenance/ Conservation Budget Items (Actual)

(2008-2009)

Items for Habitat Educational Wall:

1. Educational Posters:
   - "Leaves" - *Eureka* Poster
   - "Life Cycle of a Plant" - *Trend* Poster
   - "Life Cycle of a Frog" - *Trend* Poster
   - "Exploring Mammals" - *Trend* Poster
   - "Exploring Reptiles" - *Trend* Poster
   - "Exploring Amphibians" - *Trend* Poster
   - "Exploring Birds" - *Trend* Poster
   - "Exploring Spiders" - *Trend* Poster
   - "Exploring Insects" - *Trend* Poster
   - "Protect the Earth" - *Eureka* Bulletin Board Set (Global Warming/Recycling/Litter Control)
   - "Animal Habitats" - *Eureka* Bulletin Board Set
   - "Water Cycle" - *Trend* Poster School Crossing Sub-Total $ 56.90
2. Magazine Subscriptions:
   - Your Big Backyard- *National Wildlife Federation* magazine $ 39.90
     2 one-year subscriptions in order to cut out and post both sides of various pages on the education wall
3. Hanging Supplies:
   - 1 Hot Glue Gun $14.47
   - 2 Pkg. Glue Sticks $6.47 each $12.94

Gardening Tools and Supplies:

1. Concrete Bird Bath $ 39.97
2. 1 Bow Rake $ 9.98
3. 6 Pairs of Gardening Gloves size ladies small $ 7.88
   (to fit 3rd-5th graders): 4 at $0.98 each, 2 at $1.98 each
4. 1 Bag of Potting Soil $ 8.52
5. 2 Pruners $8.98 each $17.96
6. 2 Trowels $2.98 each $ 5.96
7. Plant Stakes and Supports for staking plants $12.97
8. 2-Gallon Pump Sprayer $24.97
9. 1 Japanese Beetle Trap Kit $ 5.97
10. Non-toxic, Organic Pesticide and Fungicide Materials $ 7.97
    Baking Soda, Dishwashing Soap, Hydrogen Peroxide, Antiseptic Mouthwash, etc

Total **$266.36**

Mini-Grant Amount -$250.00

Expenses beyond grant amount = $ 16.36


NATIONAL WILDLIFE FEDERATION®
Certified
WILDLIFE
Habitat
This property provides the four basic habitat elements needed for wildlife to thrive: food, water, cover, and places to raise young.
NATIONAL WILDLIFE FEDERATION
nwf.org


Life Cycle
FROG
EGGS/SPAWN
TADPOLE
TADPOLE WITHOUT GILLS
TADPOLE WITH LEGS
FROGLET
ADULT FROG
Female frogs lay their eggs in water
Tadpoles hatch from the eggs, swim, and breathe using gills
At six weeks, external gills disappear, and the tadpole breathes air with lungs
At eight weeks, the hind legs form
At 12 weeks, the front legs form, the tail shrinks, and the froglet can leave the water
The frog's tail is totally absorbed by its body, and the frog lives on land
Tadpole


LIFE CYCLE OF THE BUTTERFLY
Spring into Butterfly Gardening


Flower Power


Life Cycle
PLANT
SEEDS
GERMINATION
STEMS AND ROOTS
LEAVES
FLOWERS
POLLINATION
Plant