School: Endeavour Elementary

Teacher(s) & Grade(s) involved in garden program:
All five kindergarten classes and all four third grade classes.

Contact Person: Barbara Wilcox

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Time contact person can be reached: 7am-4pm

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Address (please include city and zip code):
905 Pineda St
Cocoa, FL 32922

CATEGORY (Please mark only one)
_____ SINGLE CLASS GARDEN (Garden used by one class only)
Number of students in class: __________

X _____ MULTIPLE CLASS GARDEN (Garden used by more than one class or grade, but not by the entire school)
Number of students involved in the garden: 154 plus available to entire school as an outdoor classroom

_____ ENTIRE SCHOOL GARDEN (Garden that is used by all grade levels at the school)
Number of students involved in the garden: __________

TYPE of school garden that you use with your students. (Please mark only one)
_____ Vegetable
X _____ Flower
_____ Combination vegetable/flower
X _____ Other, please specify: Herbal Tea.

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1. Please indicate the number of hours a week, on average, your students spend in the
garden. [Hour in fall, 1½ in spring at the minimum.]

2. Please mark all the activities that your students participate in prior to gardening.
   - ✔ Planning the garden
   - ✔ Designing the garden
   - ✔ Preparing the garden
   - ✔ Choosing plants
   - ✔ Other, learning about gardening tools, different
types of seeds, studying leaves, learning names
   - ✔ Names of ABC plants already in the existing garden.

3. Please mark all the activities that your students participate in while in the garden.
   - ✔ Planting
   - ✔ Watering
   - ✔ Observing
   - ✔ Recording
   - ✔ Weeding
   - ✔ Harvesting (flowers and caterpillars)
   - ✔ Playing
   - ✔ Sitting
   - ✔ Experimenting
   - ✔ Fertilizing
   - ✔ Other, reading, taking photos of plants/insects

4. Please indicate the percentage of time, on average, that you used the garden as an
   instructional tool in your classroom. [½ hours per week, at the minimum.]

5. Please mark the subject area(s) into which you have incorporated school gardening.
   Check all that apply.
   - ✔ Math
   - ✔ Science
   - ✔ Social Studies
   - ✔ History
   - ✔ Health/Nutrition
   - ✔ Language Arts
   - ✔ Music
   - ✔ Physical Ed.
   - ✔ Environmental Ed.
   - ✔ Ethics (responsibility and nurturing)
   - ✔ Other, please specify, service learning (civic responsibility)

6. Please indicate the number of years that a school garden has been part of your
curriculum. [5 years]

7. Please indicate the types of volunteers that have helped you and your students with the
garden.
   - ✔ Master Gardeners
   - ✔ University students
   - ✔ High school students
   - ✔ Older students at your school
   - ✔ Senior citizens
   - ✔ Garden club members
   - ✔ 4-H members
   - ✔ Parents/Grandparents
   - ✔ FFA
   - ✔ Teacher assistant
   - ✔ Reading specialist
   - ✔ Custodian
8. Please indicate the source(s) of information used to assist in the incorporation of school gardening into your school's curriculum. Check all that apply.

- County Extension service
- Teacher in-service training
- Personal knowledge
- Educational journals/publications
- National Gardening Association's Growlab/Growing ideas newsletter
- Other, please specify [local nurseries, etc.]

9. Please indicate the types of educational material(s) used in the classroom to support the use of school gardening in the curriculum.

- Library books
- Internet
- Filmstrips
- Textbooks
- Trade books
- Newspapers
- Other, please specify [student generated books about gardening, from previous years, photo albums and PowerPoints from previous gardening projects]
- Computer software
- Videos
- Personal books
- Experiments
- Gardening magazines and catalogs

***Please read and sign below***

By submitting the same you acknowledge and agree that the University of Florida (and Walt Disney World Co.) may reproduce the same, and all materials may be displayed (in part or in whole) at the 2008 Epcot® International Flower and Garden Festival and for other promotional materials. Such presentation materials (and School Garden packets) will NOT be returned to you (they will become the property of the University of Florida and Walt Disney World Co.). Finally, you acknowledge and agree that should your school be selected as a winner under the competition, then to the extent any of the photographs or materials submitted contain the names of likeness of students, teachers and/or others, you will be required to have adult individuals sign (and the parents/guardians of such students) sign consent/release forms provided by us so that we can display those photographs or materials concerning your winning garden. Such requirement would be a condition of your accepting the award.

I have read and understand the above.

[Signature]

Date

[3-17-08]
EDUCATIONAL RELEVANCE
How is the garden used for interdisciplinary learning? What subjects are emphasized?

Our Kindergarten Gardening project began in 2003-04 between one kindergarten class and their 5th grade science buddies. They built a butterfly garden in the shape of a butterfly to learn about plants and beautify a sandy area. Every year since this garden has been maintained and expanded. The kindergarten students (currently five classrooms) have added a Rainbow garden and gardens depicting the life cycle of the butterfly (egg, caterpillars, chrysalis and, of course, the butterfly) plus incorporated container gardens and started composting.

As our gardens continued to grow so did the amount of butterflies. This natural occurrence encouraged us to install a butterfly habitat. Beginning this school year, 2007-08, Kindergarten used a screen room tent full of nectar flowers and fennel to raise caterpillars. Our butterfly habitat is such a success that we have been able to share caterpillars with over 15 other classrooms in our school so students in other grade levels had a classroom specimen to observe metamorphosis. The butterflies after hatching were returned to the Butterfly garden to reproduce. As our gardening knowledge continued to grow so did our desire to share the excitement with other grade levels. Our third grade team of teacher took us up on our offer to become mentors to our kindergarten students and build a Tea Garden.

Throughout the school year we hold five “big” gardening days. The first day called “Transfer of the Garden” is held every fall and we invite the new first graders to come back to the garden they helped build and teach our new kindergartners how to plant a plant, how to plant a seed and how to rotate through classrooms and mentor them in each specific garden concept. This year the projects included: leaf rubbing, “eating dirt” (make “dirt” with pudding, Oreo crumbs and add a gummy worm), singing songs, putting together plant and insect puzzles, and making a cut and paste flower (Science, math/cooking/sequencing, reading, fine motor skills, and character education).

For the Tea Garden Days (one each month – January through April), each of our four third grade classes devise a plant or insect learning concept and teach it to all the kindergarteners during a garden rotation. This mentoring from our third grade students is part of our service learning project: third graders are serving the kindergarteners. The kindergarteners in return plant seeds to grow flowers to donate to our local senior center as well as invite grandparents and other senior citizens to participate in our gardening project which supports our intergenerational service learning project. (Service learning, science, citizenship skills, writing, language) While rotating through the third grade classrooms some of the activities include the following:

SCIENCE: Learning plant songs and adding movements (science, language, music, movement) Learning the parts of a plant and labeling them through a stamping activity and again as a 3-D activity (building it out of straws, cupcake papers, yarn and sunflower seeds) (science, language, art). Discovering the seed in a peanut and observing a peanuts properties (Science, observation, exploration, language) Learning the parts of a butterfly and labeling them through a stamping activity (science, language, writing) Learning and labeling the lifecycle of the plant and the butterfly through puzzle construction, art, and K’Nex (science, math, sequencing, writing)
LANGUAGE: Vocabulary: Learning the names and uses of various garden tools through a PowerPoint designed by the third graders which includes an assessment (thumbs up if this is a garden tool/thumbs down if it's not) {science, language, technology} Vocabulary: Learning the names and uses of tea equipment by naming real life equipment and making a copy out of playdoh. (Kinesthetic, language) Reading books about plants and insects, including the book “Tops and Bottoms” and retelling the story through manipulatives. (Language, sequencing) Learning the Lifecycle of the plant and butterfly through a stamping activity and retelling by using manipulatives (science, language, sequencing.)

MATH: Measuring different plants, sorting and graphing seeds, sequencing, identifying sizes and colors.

CITIZENSHIP SKILLS: Learning to be caretakers of the garden, learning how to work with one another and community members during gardening days, following rules and procedures, becoming gardening advocates.

When rotating through the garden, the kindergarten students are immersed in active participation in planting. During garden days the kindergarten students plant a plant in the garden, pull some weeds, observes the different parts of the plant, discusses the similarities and differences among the plants, measures the plants, identifies the plant colors, learns the plant names, plants herb or flower seeds, including heirloom seeds which we harvested from our fennel and basil in the fall, recycle lunchroom milk containers to use as a pot to plant seeds, and reads easy plant/insect books to a therapy dog. (Science, language, math, citizenship skills- in a real-life situation.)

Our main focus this year is maintaining our ABC/Butterfly garden while building a Tea Garden. All the kindergarteners and third graders were offered the opportunity to design the Tea Garden. The top three designs from each classroom were displayed so all kindergarteners and third graders could vote on their favorite. The winner’s design was used to form the Tea Garden. (Math, social studies-voting, art) The Tea Garden grows both herbs to make teas and flowers that are appropriate for cutting to use in vases on Tea Tables plus a bed of edible flowers. We also built a Five Senses garden through container gardening. We used five outdoor classroom planters and planted mint for taste, lemon balm and rosemary for smell, batfaced culpea for sight (flower looks like a bat’s face), lion’s ear and lamb’s ear for hearing and Black Eyed Susan (rough)/chenille plant (soft) for touch. We didn’t label the containers yet as to which sense is which but invited the other classrooms in the school to see if they can determine which container garden holds which sense. We will label them soon for visitor’s information. (Science, language, deductive reasoning)

Other activities pertaining to the garden but not done during the five gardening days include reinforcement of some of the above (life cycle study and insect/plant thematic units- in each kindergarten class taught during regular classroom time), finding caterpillars in the garden and observing their life process in nature, discussing the similarities and differences we see between this process in nature and this process in our butterfly house, (mostly similarities- our biggest difference is that it is hard to find the chrysalis in nature) taking digital photos, writing a book through our Interactive White Board (Technology, Science, Language, Reading, Writing, Publishing and Promoting), Making an ABC book by using construction paper to replicate each flower in our garden, (Language, fine motor, science observations) making compost through
food/garden waste, making compost through worm gardening, planting flowers in other areas of the campus for beautification projects and maintaining them. (Science, social study responsibility skills) Inviting local nursery owners into our classrooms to discuss various aspects of plants, flowers, herbs and butterflies. Writing thank you notes to all the helpers in the garden and visitors to our classrooms. (Language, writing, science building background) Implementing a “Johnny Appleseed Project” which includes learning about nutrition while collecting money to purchase fruit trees to plant on the campus. We planted lemon trees (instead of apple trees due to our southern location) with the thought that the lemons would also flavor our tea when we have tea parties. (Science, Language, Service Learning Project). Having tea parties in the classroom to encourage excitement about tea, utilize plants from the garden, learn manners and celebrate our friends. We always invite our community members and parents to join us in our monthly teas. (Science, Social skills, language) By the end of the year we will have had four Tea Parties, complete with host/hostesses, fancy dress-encouraged by the Fancy Nancy books, and real tea equipment (teapots, tea cups, tablecloths, vases filled with flowers cut from our gardens) (science, language, social skills, art) and tasting various ways of making teas:

1. Black tea: plain, with sugar only, with milk and sugar. Determine your favorite.
(February Tea)

2. Herbal teas: various mints, chamomile, black tea with Lemon balm flavoring.
(March Tea)

3. Iced Teas: flavored with herbs from the garden, including mints and stevia (leaves tastes like sugar) (this one will be in April)

4. Green teas and other ways to utilize teas and herbs- which might include green tea based frozen ices. (This one will be done in May so we don’t have all our ideas finalized yet)

For three years kindergarten has sponsored a garden contest. We’ve had a garden art contest, an essay contest (stories, poems or essays) and this year we are holding a garden brochure contest. This will be available for every student in the school to participate if desired. The goal is to have a brochure to print and use as publicity and also as a tour guide for visitors to our campus so they will know where all the various gardens are located and what each of them are called. (Language, art, science)

As we have had for the past four years, kindergarten will hold a Garden Celebration where each of the kindergarten classrooms devises a song, skit, play, or story about plants, insects, or gardening and performs it for all our garden volunteers. (Science, language, music, art, public speaking.) During the celebration we also give certificates to garden contest winners, garden design winners, and our volunteers: students and adults. We have a tradition of the kindergarten students drawing pictures to match the words to the song “What A Wonderful World” which we show as a slide show and invite the audience to sing along. (Art, music, technology, building community)

What resources are used to facilitate garden learning?

Several grants were written and awarded to fund the Tea Garden, Tea Parties and Worm Composting ($6,667. Learn and Serve, $500.00 Bright Ideas, $1,524 Learn and Serve amendment, $2,239. Ag in the Classroom, Total: $10,930 for 2007-08). They provided resources for the garden including but not limited to the purchase of plants, seeds, fertilizer, raised bed garden material, worm composters, caterpillar and ladybug larva, books and manipulatives to use during garden rotations (including playdoh, food, plant/insect puzzles, Lifecycle K’Nex) outdoor classroom planters to build our Five
Senses gardens and also to provide outdoor classroom planters to four other classrooms who showed interest in building and maintaining their own garden plus small butterfly houses for classrooms to observe live caterpillars that was harvested from our butterfly garden.

Endeavour funded and installed an irrigation system this past summer which has really helped our gardens bloom. In addition, each classroom in our school has now been outfitted with document cameras and Interactive Whiteboards which allows us to develop PowerPoint’s, Write stories using digital pictures and share interactive games with the entire class. Our library has a gardening corner full of books that pertain to plants and animals in the garden. The internet provided lessons and research for our projects. Our magnet grant matched our Tea Garden supply grant and purchased an additional four raised garden beds and a bird bath. (This bird bath was a necessity as it was the only item missing from our objective of filling for a Backyard Wildlife Certification). Ideas are also shared with us from teachers outside our grade level and school.

Two local nurseries provide discounts, plants and information about plants and insects. In addition, both nurseries have sent speakers to our kindergarten rooms to discuss plants and insects, share garden experiences and donate plants, as well as volunteer to help the student’s plant during gardening days. Community resources also include donations from local businesses including $200 from Winn Dixie for Tea Parties and $300 from Walmart, and $100 from Rockledge Gardens.

Parents, Community volunteers as well as older students were used throughout the year to help in the garden and in the classrooms, during gardening days and Tea Party days. All of our garden accents and tea party linens, cups, and pots were donated by our parents and grandparents.

The local community college adopted Endeavour as one of their service learning projects and in addition to implementing a reading intervention program they held a Garden Weeding Day in November.

The local agriculture department provides us with learning resources, pamphlets, and other learning tools as well as promotes our gardening days and requests for master gardeners in their newsletters (which after three years of asking, we finally have a master gardener that volunteers at each of our Gardening days and also during our Tea Parties.) The state Ag in the Classroom department provided us with curriculum notebooks filled with ideas on how to do projects concerning agriculture.

What Florida Sunshine State Standards are addressed with the garden?
Science: The Practice of Science: Collaborate with a partner to collect information. Make Observations of the natural world and know that they are descriptors collected using the five senses. Keep pictorial records, observe and create a visual representation of an object which includes its major features, recognize that learning comes from careful observation. Properties of Matter: Sort objects by observable properties, such as size, shape, color, temperature, weight and texture. Motion of Objects: Investigate that things move in different ways, such as fast, slow, etc. Organization and Development of Living Organisms: all plants and animals, including humans, are alike in some ways and
different in others. All plants and animals have internal parts and external structures that function to keep them alive and help them grow and reproduce. Humans can better understand the natural world through careful observation. Recognize that some books and other media portray animals and plants with characteristics and behaviors they do not have in real life.

**Language:** Reading: phonemic awareness (identify initial sounds/letters, “A is for Angelonia”), Vocabulary: use new vocabulary that is introduced and taught directly, describe common objects and events in both general and specific language, use language correctly to express spatial and temporal relationships, relate new vocabulary to prior knowledge, Comprehension: make predictions about text, use background knowledge, supporting details from text, to determine if reading selection is fact or fiction, retell the main idea, arrange events in sequence, select materials to read for pleasure, participate in group response to various literary selections and connecting text to self and text to world, identify purpose of nonfictional text, retell important facts from text heard or read.

**Writing:** connect thoughts and oral language to generate ideas, draw a picture about idea from stories read or class discussion, draw/tell/write about a familiar experience, topic or text, knowledge of letter/sound relationships to spell simple words, create narratives by drawing, dictating and/or using emergent writing, participate in writing simple stories, poems, rhymes, or songs, write friendly letters or thank you notes. **Listening and Speaking:** Listen carefully and understand directions for performing tasks, listen to fiction/nonfiction read alouds and demonstrate understanding, recite short poems, rhymes, songs, and stories with repeated patterns, communicate effectively when relating experiences and retelling stories heard, use complete sentences when speaking. **Research Process:** ask questions and recognize the teacher as an information source, use simple reference resources to locate and obtain information (pictures/environmental print), participate in creating a simple class report where the teacher is the scribe. **Technology:** Use technology resources to support learning (interactive whiteboard, digital cameras, internet, PowerPoint, videos)

**Math:** Represent quantities with numbers up to 20, verbally, in writing and with manipulatives, solve problems by comparing, ordering, creating sets up to 20, solve word problems involving simple joining and separating situations, describe/sort/re-sort objects using a variety of attributes such as shape, size, and position. Interpret the physical world with geometric shapes and describe it with corresponding vocabulary, use basic shapes, spatial reasoning, and manipulatives to model objects in the environment and to construct more complex shapes. Compare and order objects indirectly or directly using measurable attributes such as length, height, and weight. Identify and duplicate simple number and non-numerical repeating and growing patterns

**Social Studies:** Understands broad categorization of time. Knows the accomplishments of major scientists and inventors (ex. Booker T. Washington/peanuts), uses simple maps to identify places, knows basic needs and how families in the US and other countries meet them, knows the role that resources play in our daily lives, knows the qualities of a good citizen, knows that a responsibility is a duty to do something or not to do something, knows the sources of responsibility, examples of situations involving responsibility, and some of the benefits of fulfilling responsibilities.

**LEVEL OF INVOLVEMENT**

**How does the garden promote student leadership?**
Students in first, third and fourth grade work in partnership as mentors to our kindergarten students. First grade students mentor our kindergarteners in responsibility for the garden, garden procedures and social skills during our Transfer of the Garden Day. Third grade students construct learning situations where they are matched with a kindergarten student to instruct them in that particular activity during our Gardening Day rotations, any specific third grade student will mentor five different kindergarten students in a one-to-one situation during our gardening rotations. This enables the third graders to plan lessons, teach a concept, and reflect upon their responsibility. These students are self-initiated and develop communication skills with the younger students while they are learning new things themselves. A classroom of fourth graders has adopted our garden as one of their services. They prepare the garden for gardening days, which usually consist of digging 100 holes for the kindergarteners to plant. They model perseverance, hard work, determination and cooperation after which they help the kindergarteners, one at a time, discuss the plant they are planting, identify the parts of the plant, plant the plant and take care of the tools used. The kindergarteners themselves are learning leadership roles by being advocates of the garden and Keeping Endeavour Beautiful. (Keeping it litter free/weed free and encouraging others to do the same) Learning about our area senior citizens and participating in projects with them and for them has given our kindergarteners practice in leadership skills such as responsibility, caring and problem-solving.

A local college has been invited to participate in our gardening projects as part of their service learning requirements. To date 6 college students have spent at least four hours working in the garden. This is actually leadership from outside our school but it models future possibilities for our students as well as citizenship skills.

Are there partnerships with garden-related organizations? (Master gardeners, Garden Clubs, Local Garden Businesses, etc.)

Both local nurseries are staunch supporters of our gardening activities. Both donate plants and provide discounts. Both nursery owners participate in gardening days and schedule classroom discussions to talk about different plants that will be planted during the gardening days. They have even given us multiple plants complete with caterpillars and/or eggs. In addition, to the physical involvement they are both utilized as expert resources and are willing to answer questions readily and frequently. The owner of Naturewise, a Florida Native plant nursery has spoken with the kindergarten students three times so far this year (and will also speak prior to our next two gardening days in April and May) She has discussed the Scorpion Tail plant, the Black-eyed Susan, the state flower: Tickseed (otherwise known as C is for Coreopsis in our ABC garden) and the Passion-vine plant. The owner of Rockledge Gardens has discussed butterfly plants and herbs, including stevia- which is a plant with a leaf that tastes like sugar that we can grow, harvest and add to our tea during our tea parties. The county extension office as well as the Cocoa/Rockledge Gardening Club has run articles about our garden and requested support. We have a master gardener who has participated in each of our gardening days in addition to our tea parties. She has helped us plant plants, brought samples of plants to share and discuss with the students and brewed an herbal tea for us to try during one of our Tea Parties.

What type of school support is there for the school garden program?

Our entire school continues to be supportive and excited about the gardens.
Our kindergarten gardens are just one garden on campus. We also have a hydroponic strawberry garden (5th grade) a PreK garden and a raised bed multiple grade level garden. (2nd grade has planted companion plants and 4th grade has planted tomatoes and peppers). PreK approached our grant writing kindergarten teacher for help writing a grant to build a PreK butterfly house after seeing the success with the kindergarten butterfly habitat and receiving caterpillars from the kindergarteners. Classrooms that have an outside door are requesting classroom container gardens after being inspired by the kindergarten Five Senses gardens. This has afforded more and more students throughout the school the opportunity to participate in learning through gardening. Our administration supports the gardens whole-heartedly and frequently brings visitors to our gardens on a tour as well as monetarily supports the gardening efforts by funding tables and benches to use in the garden. This year, when asked about building a permanent butterfly habitat to expand our gardening projects (our plan for next year) not only did the principal agree to the idea she also decided to fund it so our garden grant writer will only need to write grants to fund the plants and not the entire structure. In addition, we have a pre-k assistant, a reading coach and our magnet coordinator that volunteer during our gardening days to help the student’s plant, take photos, generate publicity and share our achievements with visitors. Our custodians help care for our gardens (by keeping it mowed and edged) as well as helping us remove sod for the new Tea Garden and replanting it elsewhere, keeping the garden watered over the summer prior to the installation of our new irrigation system and protecting it from over zealous movers when a portable was being moved on the campus. (The movers wanted to do the job quickly which involved running over the Butterfly Garden but our custodians practically laid down in front of the semi until they devised a method to move the trailer without disturbing our gardens, for which we are VERY grateful.)

**What type of community support is there for the school garden program (parents, neighbors, community)?**

As mentioned previously, we have the support of two local nurseries, two big businesses (Wal-Mart/Winn-Dixie) and a master gardener. In addition to several parents we also have a mother and a grandmother of students in our school (that are no longer in kindergarten) that continue to support our gardening days and our gardening ventures, including purchasing all our Tea Party supplies (real teapots, tea cups and linens). Florida Today, our local paper has supported our gardening projects over the years and has continued this year to provide us with positive recognition as well as providing us with resources (websites) and contacts of possible support. The state Learn and Serve website touts our Service Learning PowerPoint that depicts our garden journey for the last four years. (See: http://www.fsu.edu/~flserve/projects/projects.html)

Not only do we have support of our immediate community, we also have support and positive reinforcement from other schools that send visitors to our school to view the gardens and borrow ideas. They appreciate the time we spend to encourage and inspire them to develop gardens at their schools.

**GARDEN QUALITY**

**How/ by whom was the garden designed?**

The original butterfly garden (03-04) was designed by the teacher of one of our kindergarten class but was built by their sixth grade book buddies. The following year (04-05) we added the ABC garden. This was measured and designed by fifth grade and
voted upon by the kindergarteners. The kindergarteners then built the ABC garden. In 05-06 we just continued to improve the existing gardens and built a butterfly nursery area. In 06-07, we added the Rainbow Garden in an area in front of our kindergarten rooms that was still sandy. As this area was already defined by a sidewalk on one side and a portable on the other, there was no designing necessary, we just added flowers and a Rockwall border. Our newest garden this year, (the Tea Garden) is the brainstorm of our original butterfly garden kindergarten teacher but was designed and voted upon by the kindergarten and third grade students. The winning design-designed by a third grader-was used to build the Tea Garden.

What qualities make this garden unique?
The Tea Garden is unique in the fact that it is the first tea garden built on a school property in our county (and possibly our state!). Its design is semi-formal and appears more proper (like an English garden) than the sprawling ABC/Butterfly garden. It consists of 7 raised garden beds, four of which are filled with herbs to be used to make tea, two filled with flowers that will be cut to decorate the tea tables and one that will be planted in April, which will grow edible flowers. While most gardens are made for flowers or for vegetables our garden is a “drinking garden”. We can utilize everything in the garden during our tea parties. The raised bed gardens are arranged in a three sided square (one side, facing the sidewalk is open). There are topiaries in the corners to provide elegance and awareness of a different type of plant. Tables are placed in the middle of the beds so that people seated at the tables are surrounded by plants on three sides and as the tables are separated by a garden bed; it appears to be more intimate. We are only half way through building this garden as we have two more gardening days (one in April and one in May) and already we have received multiple positive comments about how beautiful it is along with appreciation for giving our students alternative methods for learning. While designed as a Tea Garden this area can still be utilized as an outside classroom to every classroom on campus and has already been utilized during Book Buddies as a wonderful place to read.

How is the garden cared for and maintained?
The garden is planted, cared for and maintained by the kindergarten students during the course of the year. The students run into difficulties during Winter/Spring/Summer break and then the maintenance schedule is the complete responsibility of the teacher in charge and the custodians. Thanks to the instillation of an irrigation system, we (kindergarten teachers and students) no longer have to worry about a watering schedule, however, the frequent watering have produced more weeds than previous years (but we are not complaining as the flowers have also bloomed better when we can get all areas of the garden watered at once). The kindergarteners, kindergarten teacher, and custodians all pitch in to keep the weeds down. Sometimes we utilize a “Read and Weed” day when book buddies come to the garden and some are reading with their buddy while others are weeding with their buddy and then they switch jobs. While we do want the students to be responsible for the garden we don’t want to take up all our learning time for maintenance so we do limit the amount of weeding done by the students. Just enough so they understand that gardens have weeds, what are weeds, and how to distinguish them from the flowers that we want to keep growing. We also involve our students who for whatever reason have had to be removed from their classroom and give them the opportunity for community service by weeding an area. (Sometimes this helps them work off their anger
so they are ready to calm down and talk about the problem and sometimes depending on
the student it is retribution). Our local college, Brevard Community College, with whom
we partner with for a Reading Intervention initiative wanted to spend additional service
learning hours so they adopted our garden as one of their service learning projects and
spent one day last fall weeding all the gardens. The rest of the time, the garden is
overseen and maintained by the original kindergarten gardening teacher.

How were the plants selected and used?
The plants were selected due to their Tea Properties. While the kindergarteners did
discuss different types of herbs and flowers, they are currently still learning about all the
different herbs and still participating in tea tests during our Tea Party days so most of the
plants are selected by the teacher in charge due to the cost, availability and lessons to be
designed around the particular plants. When the students show a preference for one plant
or another the teacher in charge tries to provide more of that plant during gardening days.
For example, after a visit by Ms. Kari (the Florida Native Plant Nursery owner) the
students were very excited about the Black-eyed Susan and as we were replacing plants
in the butterfly garden during that gardening day it was a given that there would be lots of
Black-eyed Susan’s to plant that day.

Is there an environmental focus to the garden program?
This year our focus is to be certified as a Backyard Wildlife Area. We will meet all the
criteria once our solar bird bath arrives and is installed. As always, we have a goal of an
aesthetically pleasing campus and have currently won the last four Keep Brevard
Beautiful School Environmental Monthly awards. As we only use organic fertilizers in
our gardens we are researching the possibility to be certified as an organic garden. As our
butterfly population has grown and the interest in insects has expanded throughout the
school we are providing more and more caterpillars to classrooms for observational
purposes. Hopefully after the construction of our permanent butterfly habitat (next year’s
project) we will be in the position to expand our caterpillar harvesting to more classrooms
and possibly other schools.

Watching a Fritillary hatch in its natural environment.
Observing different types of butterflies in the garden.

Butterfly Habitat

Swallowtail butterfly grown inside the butterfly habitat.

Swallowtail chrysalis

Swallowtail caterpillar inside the butterfly house.
I down and read below for the rules and regulations of the Garden Brochure Contest. This might be a fun activity as you are trying to "de-stress" from the FCAT testing this week or next.

Garden Gardens:

**ABC Garden**: The ABC garden consists of plants beginning with each letter of the alphabet (Angelonia, Butterfly Bush, Coreopsis, Daisy, Eyeball plant, Firecracker plant, Gaura/Gazania, Heather, Ixora, Jacobina, Kalanchoe, Lavendar/Lemon Balm, Million Bells, Nemesia, Oregano, Porterweed, Q-Quick-growing, Ruella, Salvia, Tarragon, U-ugly spot, Verbena, White flowers, Xanadu, Yarrow, Zinnia)

**Butterfly Garden**: The butterfly garden includes part of the ABC garden. It shows the lifecycle of the butterfly. Egg: Eyeball plant, Gaura, Gazania (it is the small round circle garden), Caterpillars: These are the two wavy lines consisting of the beginning of the ABC flowers. Chrysalis: It is the shape of a chrysalis/raindrop and it is attached to the Flower Garden. It is full of herbs-a host plant for caterpillars. Butterfly: It is the big garden in the shape of the butterfly with the stepping stones down the middle, The majority, but not all of the plants in the butterfly garden are native Florida plants.

**Rainbow Garden**: This is the line of flowers in-between my room and Mrs. Post's room. Starting closest to my room the flowers proceed along the colors of the rainbow (red, orange, yellow, green, blue and purple.) We added pink and white as the "prize" at the end of the rainbow.

**Five Senses Garden**: These are the garden containers on the sidewalk outside our room. Five of them are the Five Senses gardens and four of them are our individual classroom gardens. Smell, Sight, Hearing, Taste and Touch. Have you toured them yet? Can you tell which is which?

**Butterfly Habitat**: This is the screened tent (hopefully soon to be a permanent building in the same area- our big project for planting next year). During different times of the year we have all the stages of the butterfly for observation. Currently we have eggs, caterpillars and butterflies, if we have any chrysalis's inside I haven't found them but that doesn't mean they are not there.

**Tea Garden**: This is our new formal garden that we are building with third grade help. The raised beds planted so far have herbs to make teas (mints, chamomile and lemon balm) and flowers we can cut to decorate our tea tables. Planting in April will finish the Tea Garden with two more tea herb beds, one more cut flower bed and one bed of edible flowers.

Gardens on campus that we would like included in the brochure, if you need more information:

- White had a great idea about working on it as a **class project** and I think that's a wonderful way to get your whole involved. I can give you more specific information on any of the kindergarten gardens if needed.

**A** is April 18 (so we can announce the winners on Earth Day)

- require participation.

The contest is open to all students in kindergarten, first, and second grade. Winners will be announced on Earth Day, April 18. A winner will win **Endeavour** a 4 x 4 raised bed garden that will become part of the Tea en- through a donation from the Small Garden Design/LockRock company.

A top winner (or several top winners if we decide to combine aspects of different entries).

- A grade level winner
- And a winner in each classroom that has full participation
- Will all receive awards during our Garden Celebration in May.

There are plenty of opportunities to let your students shine. Please keep this in mind when you are planning writing.

- Deadline is far away but we learned last year that some teachers need more than 2-3 week notice to correlate the st to themes/lessons.

- Questions, let me know. Thanks. Barbara
Businesses divided about effect of ongoing road work

BY MICHELLE SALYER
FOR FLORIDA TODAY

ROCKLEDGE — About halfway through the city of Rockledge’s $7 million Back to Barton campaign to redevelop Barton Boulevard, feelings are mixed among the area’s business owners and residents.

Work on the street got underway in April 2007 and construction crews have had a constant presence since.

According to Rochelle Lawandales, consulting director for the city’s community redevelopment agency, the majority of the underground work has been completed, including “enormous improvements to stormwater systems” and upgraded utilities. Crews soon will complete work on sidewalks, resurfacing roads and planting trees as well as adding medians, new street lights and mast-arm traffic lights.

The project is on time, if not “slightly ahead,” Lawandales said. “Everything is going to start coming together.”

The projected completion date is in August.

See BARTON, Page 9

City sees the light to a greener way

BY CHRISTINE EBERSBACH
FOR FLORIDA TODAY

COCOA — The city of Cocoa has a bright idea to save energy while lighting its streets.

In replacing older, less-efficient lampshades...
Value added. Master Gardener and volunteer Judy Lipofsky helps Endeavour Elementary kindergarten students plant seeds for the Cocoa school's butterfly garden.

Endeavour's kindergarten students learn the garden

Garden, from Page 1

"I have the time and I know a few people here," said Donow, who has donated his time to the school for about a year and a half. "It's a lot of fun and very rewarding. It's also great to see the garden grow."

Of course, gardens cost money, but local businesses and the government continue to help the Title I school meet its budget needs.

Title I is a federal designation for schools, where a large percentage of students qualify for reduced-price or free lunches, which in turn qualifies the school for special programs.

"We actually had three grants to implement the garden this year," said Barbara Wilcox, a kindergarten teacher and overseer of the garden.

"We got donations from Wal-Mart and Winn-Dixie, not only for the garden, but also for the tea party we're going to have when our garden has grown."

The garden — an ongoing project at the school — features many Florida-friendly plants, including those that attract butterflies.

This season, Wilcox also wanted to incorporate the five senses into the garden.

For example, plants included mint for taste, lion's ear and lamb's ear for hearing, lemon balm and rosemary for smell, soft January 30, 2008

BARTON, from Page 1

While many area businesses welcome the end result, some say their businesses have suffered and that the end of construction can't come soon enough.

At The Karat Patch jewelry store, owners Linda Stanley and her son, Greg, say business has been down since last August.

"We have customers and friends tell us they never drive down Barton anymore because of the construction and the mess," Linda said. "It's bumpy, it takes forever and you never know which lane is going to be closed."

One of the store's two entrances has been relocated from Barnes to Baldwin Street, and the planned median will make it difficult to get into the store, say the jewelers.

Looking on the bright side, Greg Stanley compares the roadwork to his own business.

"It's like making jewelry, you don't want to see it while it's being worked on — it's ugly, it's messy. But when it's finished, it looks great."

Negative outlook

Just down the street at the Circle K, assistant manager Mary Cole is not so optimistic.

She says the convenience store has had its main entrance blocked by construction all day on four separate days, cutting its business by at least 50 percent on those days and about 20 percent overall since the project started.

She's not hopeful that the redevelopment will bring new business either.

"I think they're wasting our tax money. I don't think it's going to make any difference."

Neighborhood resident Ronald Rockwood also is unhappy with the changes.

"The construction isn't the bad, but they've lowered the speed limit from 40 to 30 and now you really have to watch it."

He misses the right-turn lane at Huntington Lane that used to allow him quicker entry to his Forest Drive home and thinks the new medians will make navigating the road inconvenient.

Cocoa Village sees the lights

LIGHTS, from Page 1

lights in downtown and better lighting throughout the city.

Palmer presented the findings to Susan McGrady at the Redevelopment Agency (RDA). Palmer said that McGrady, "has always been wonderful" in working with the city and its residents. After the RDA finished the project, the city continued to work with the organization, but it was not finished.

Although the project was completed in 2006, the city is still working on the medians and the lighting. For the past three years, the city has been working with the organization to finish the project, but it was not finished. The city is still working on the medians and the lighting.
BY WADE ARNOLD
FOR FLORIDA TODAY

COCOA — Kindergartners at Endeavour Elementary School attended a formal tea recently to celebrate a $3,200 state grant and the planned herb and tea garden they will create with the money.

"We wanted the kids to get excited about the tea garden," said Barbara Wilcox, the student's teacher at the school.

During the party, the kids learned how to respond in different situations, she said, and how to watch their manners in a formal setting.

Planting of the garden should begin this month.

"It will be an herbal tea garden. Students will grow their own herbs that they can turn into teas," she said. "There might be something like camomile or lemon balm. They will pick them and wash them, and then they can fill their own tea bags."

Third-grade students are also involved in the garden, she says, and the focus is on how the students learn new things.

"Everything we try to do is make their learning hands-on," Wilcox said. "Taking care of the plants shows how to take care of each other."

"Students who learn to "think outside the box," Wilcox said, are more successful in life."

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