Vegetable Garden Journal
School: Griffin Elementary
Teacher(s) & Grade(s) involved in garden program: Mrs. Miladys Cepero-Perez

Contact Person: Miladys Cepero-Perez
Email address: miladys.cepero-perez@browardschools.com
Time contact person can be reached: 8:00 - 3:00
Phone: (754) 323-5900  Fax: (
Address: 5050 sw. 116 ave. Cooper City, FL. 33330

CATEGORY (Please mark only one)

✓ SINGLE CLASS GARDEN (Garden used by one class only)
  Number of students in class: 23

___ 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: 

___ 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

___ Flower

___ Combination vegetable/flower

___ Other, please specify: 

1
1. Please indicate the number of hours a week, on average, your students spend in the garden. 1 1/2 hours

2. Please mark all the activities that your students participate in prior to gardening.

✓ Planning the garden  ✓ Preparing the garden
✓ Designing the garden  ✓ Choosing plants
Other.

3. Please mark all the activities that your students participate in while in the garden.

✓ Planting  ✓ Watering  ✓ Weeding
✓ Observing  ✓ Recording  ✓ Harvesting
✓ Playing  ✓ Sitting  ✓ Fertilizing
✓ Experimenting  Other.

4. Please indicate the percentage of time, on average, that you used the garden as an instructional tool in your classroom. 1 hour

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.

6. Please indicate the number of years that a school garden has been part of your curriculum. 1 year

7. Please indicate the types of volunteers that have helped you and your students with the garden.

✓ Master Gardeners  ✓ Senior citizens  ✓ Parents
✓ University students  ✓ Garden club members  ✓ 4-H members
✓ High school students  ✓ FFA
✓ Older students at your school  Other, please specify.
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   □ 4-H education materials
✓ Teacher in-service training  □ Lifelab
✓ Personal knowledge         □ Master Gardener training
✓ Educational journals/publications  □ Friends/volunteers
✓ National Gardening Association’s Growlab/Growing ideas newsletter
□ Other, please specify __________________________________________________________________________

_____________________________________________________________________________________________

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                      ✓ Computer software
✓ Internet                           ✓ Videos
✓ Filmstrips                         ✓ Personal books
✓ Textbooks                          ✓ Experiments
✓ Trade books                        ✓ Gardening magazines and catalogs
✓ Newspapers                         □ Other, please specify __________________________________________________________________________

_____________________________________________________________________________________________

***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
I have read and am currently reading nonfiction books aloud to my class on the topic of growing gardens. These books are science and social studies related. I utilize an LCD projector and a document reader camera to demonstrate all the graphics, pictures and captions of the books, which captures my students’ attention and excitement. Students are keeping a weekly journal in which they write about their observations and conclusions regarding temperature, rain fall, plants’ growth, and garden visitors (insects, frogs, spiders, and snails). We placed a rain gauge in our garden to keep a record of how much
water we need to use every day. For instance, last week we had 2 ½ inches of rain, so we did not water the plants for three days because they had adequate moisture.

In addition, we are following the weather projections for our area. One night in the month of February, the temperatures were very low, so students researched on the Internet what to do in those cases. In their research, they found that we needed to water the plants plentifully in the afternoon and cover our garden with plastic bags during the evening hours to maintain lower temperatures. The following day they uncovered the garden and the plants looked very healthy.

Students learned about nutrition and why eating vegetables is healthy for our bodies. After we cut our first lettuce leaves, I showed my students how to clean them well before consuming them. Then, we had a salad at the cafeteria during our lunch.

The garden has been instrumental in teaching character education, such as responsibility, cooperation, caring, and conflict resolution. For instance, one of our special education students from our emotionally disabled cluster program took out some leaves from our cucumbers while waiting for his bus to arrive. One of my students saw him doing this and informed me of this incident. I spoke to the child about taking care of our garden. He was very upset about it, and he was not willing to listen. At that point, the ESE teacher came to handle the situation. I told the child that I would like to speak to him the following day. The next day, his teacher brought him to my classroom, and some of my students in a very friendly way explained to the ESE student why it was important to take care of the garden. He agreed that he would help us take care of the garden. In exchange for his help, we declared him one of our garden patrols, and that we will invite him over to eat our vegetables with us. This has been a great project for this ESE student and for my students. My students learned to be tolerant of others and how to solve a conflict by using peaceful ways. The ESE student learned that it is great to work out problems by talking and working cooperatively with people to achieve great things!

Furthermore, students are taking digital pictures of every step of the garden to create their Power Point presentations about their experience and what they have learned.

What resources are used to facilitate garden learning?

The resources used to facilitate garden learning are our Science text book, Math text book, picture books about plants and life cycle of plants, soil, vegetable seeds, plastic containers, garden journal, and gardening tools.

In addition technology resources include the Internet, students' laptops, digital cameras, Microsoft Power Point, LCD projector, and a document reader camera.

What Florida Sunshine State Standards are addressed with the garden?

Science

Big idea 14: Organization and development of living organisms.

A. All plants and animals, including humans, are alike in some ways and different in others.
B. All plants and animals, including humans, have internal parts and external structures that function to keep them alive and help them grow and reproduce.
C. Humans can better understand the natural world through careful observation.

SC.3.L.14.1 Describe structures in plants and their roles in food production, support, water and nutrient transport, and reproduction.
SC.3.L.14.2 Investigate and describe how plants respond to stimuli (heat, light, gravity), such as the way plant stems grow toward light and their roots grow downward in response to gravity.

SC.3.L.14.In.a Identify the major parts of a plant, including seed, root, stem, leaf, and flower, and their functions.


BIG IDEA 17: Interdependence

A. Plants and animals, including humans, interact with and depend upon each other and their environment to satisfy their basic needs.

B. Both human activities and natural events can have major impacts on the environment.

C. Energy flows from the sun through producers to consumers.

SC.3.L.17.2 Recognize that plants use energy from the Sun, air, and water to make their own food.
SC.3.L.17.1 Describe how animals and plants respond to changing seasons.

Social Studies

Standard 2:

SS.B.2.2 The student understands the interactions of people and the physical environment.

1. Understand why certain areas of the world are more densely populated than others.

2. Understands how the physical environment supports and constrains human activities.

3. Understands how human activity affects the physical environment.

4. Understands how factors such as population growth, human migration, improved methods of transportation and communication, and economic development affect the use and conservation of the natural environment.

Math

MA.3.G.5.1 Select appropriate units, strategies and tools to solve problems involving perimeter.

MA.3.A.1.2 Solve multiplication and division fact problems by using strategies that result from applying number properties.

Reading

Informative Standard: The student develops and demonstrates technical writing that provides information related to real-world tasks.

The student will:
LA.3.4.2.1 - write in a variety of informational/expository forms (e.g., rules, summaries, procedures, recipes, notes/messages, labels, instructions, graphs/tables, experiments, rubrics); LA.3.4.2.2 - record information (e.g., observations, notes, lists, charts, map labels, legends) related to a topic, including visual aids as appropriate.

🌟 Technology Standard: The student develops the essential technology skills for using and understanding conventional and current tools, materials and processes.

The student will:
LA.3.6.4.1 - use appropriate available technologies to enhance communication and achieve a purpose (e.g., video, websites); and
LA.3.6.4.2 - use digital tools (e.g., word processing, multimedia authoring, web tools, graphic organizers) to present and publish in a variety of media formats.

🌟 Research Process Standard: The student uses a systematic process for the collection, processing, and presentation of information.

The students will:
LA.3.6.2.3 - communicate information in an informational report that includes main ideas and relevant details with visual support (e.g., text supported by poster, diagram, idea map).

🌟 Nonfiction Standard: The student identifies, analyzes, and applies knowledge of the elements of a variety of nonfiction, informational, and expository texts to demonstrate an understanding of the information presented.

The student will:
LA.3.2.2.1 - identify and explain the purpose of text features (e.g., table of contents, glossary, headings, charts, graphs, diagrams, illustrations);
LA.3.2.2.2 - use information from the text to answer questions related to explicitly stated main ideas or relevant details;
LA.3.2.2.3 - organize information to show an understanding of main ideas within a text through charting, mapping, or summarizing;
LA.3.2.2.4 - identify the characteristics of a variety of types of text (e.g., reference, children's newspapers, practical/functional texts).

🌟 Vocabulary Development Standard: The student uses multiple strategies to develop grade appropriate vocabulary.

The student will:
LA.3.1.6.1 - use new vocabulary that is introduced and taught directly;
LA.3.1.6.2 - listen to, read, and discuss familiar and conceptually challenging text;
LA.3.1.6.3 - use context clues to determine meanings of unfamiliar words;

🌟 Reading Comprehension Standard: The student uses a variety of strategies to comprehend grade level text.

The student will:
LA.3.1.7.1 - identify a text's features (e.g., title, subheadings, captions, illustrations), use them to make and confirm predictions, and establish a purpose for reading;
LA.3.1.7.2 - identify the author's purpose (e.g., to inform, entertain, or explain) in text and how an author's perspective influences text;
LA.3.1.7.3 - determine explicit ideas and information in grade-level text, including but not limited to main idea, relevant supporting details, strongly implied message and inference, and chronological order of events;
LA.3.1.7.4 - identify cause-and-effect relationships in text;
LA.3.1.7.5 - identify the text structure an author uses (e.g., comparison/contrast, cause/effect, and sequence of events) and explain how it impacts meaning in text.

**Level of Involvement**

How does the garden promote student leadership?

My students have taken a leadership approach to bringing awareness to our entire student population. They are taking care of the garden at dismissal and at arrival time, while speaking to other students about what kind of vegetables are in our garden and sharing their experiences. Also, they are very proud of what they have achieved through hard work in their garden. My class is scheduled to appear during morning announcements on our school TV WGES. They are preparing scripts and creating signs about gardening and proper nutrition. The students were the ones who fostered this idea to bring awareness about health and nutrition, as well as gardening to our school population.

Are there partnerships with garden-related organizations (Master Gardeners, Garden Clubs, local garden businesses, etc.)?

Yes, we do have partnership with the National Gardening Association. We receive their monthly Children’s in the Garden newsletter via e-mail. Students read the newsletter to learn new tips about gardening, and to explore the website and read passed newsletters. In addition, our school has an environmental club called E-Patrol that promotes the love for our natural environment. The children learn about recycling, ways to save and improve our planet. They also, promote the love and protection of animals. E-Patrol partnerships with us to increase students’ awareness for helping our garden grow.

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

The garden received financial support from a grant that I received from the Broward Education Foundation. This organization helps teachers to implement and adapt grants to enhance the teaching of the Sunshine State Standards. Also, our PTA is helping by providing volunteers. Furthermore, our school principal Ms. Novotny has been very supportive. The students love to invite her and other teachers to our garden to acknowledge our achievements.

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

My students and I have had an incredible support from our classroom parents, PTA volunteers, and neighbors. Parents have come during and after school to help us plant, transplant, and add soil to our garden. Also, our Parent Teacher Association volunteers have gone out of their way to go to stores and purchase necessary items to maintain the garden. Our PTA President, who lives across the street from school, waters our garden on the weekends and/or during our vacations. Students will create an art
project and write thank you notes to honor all the volunteers who have kindly helped
during our volunteers’ week celebration.

**Garden Quality**

**How/By whom was the garden designed?**
Our vegetable garden was designed by my students. They decided what kind of
vegetables to plant according to our geographical zone. Then, they chose their favorite
vegetable among the choices that were available to plant. We went on a field trip around
our school campus to find the best place for our garden. After students researched the
weather conditions that our vegetables needed, they placed the garden in an area that
faces South East. Students decided this because the plants would receive the morning
sun, but had shade in the after noon when the sun’s rays could damage our plants due to
the high temperatures in our area.

**What qualities make this garden unique?**
This garden is unique because not only are students learning gardening and acquiring
new knowledge, they have also learned to work cooperatively with others. I was very
excited as a teacher to create this garden because I thought that my students could learn a
lot of science and math skills while having fun; however I fell short on my expectations
because my students have learned much more than that. They have learned to appreciate
the beauty that nature and friendship can bring to one’s life. They have become leaders
who are proud of what they have achieved. They have learned about nutrition, and why is
important to eat vegetables. For the past seven years, for our Thanksgiving celebration, I
cook a vegetable soup for my students, but this has been the first year that my students
actually ate it! I believe that they got the message from planting and taking care of our
vegetable garden!

**How is the garden cared for and maintained?**
Students are the caretakers of our garden. They have transplanted plants as they grow,
thinning them as needed, and ensure proper irrigation.

**How were the plants selected and used?**
The plants were selected by students and are used for academic and nutritional
purposes. I gave more details in the first question.

**Is there an environmental focus to the garden program?**
Definitely the garden has had an environmental focus. Students learn about pesticides
and why they are not safe to use in our garden. For example, one day we discovered that
our garden was invaded by snails that were eating one of our tomato plants. When
researching for a way to keep them out of our garden, students needed to interview our
head custodian who explained to them that according to school board policy, we are not
allowed to use any kind of pesticides on school campus. He recommended finding natural
ways to keep the snails away. Students researched and found that a mixture of garlic,
onion and water sprayed directly on to the plants would keep the snails away. We
prepared the mixture and it worked. They have learned the importance of photosynthesis
and animal respiration in our environment. They have learned that we need plants to keep
our environment healthy.
## Garden Layout

<table>
<thead>
<tr>
<th>Carrots</th>
<th>Cucumbers</th>
<th>Onions</th>
<th>Carrots</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Carrots" /></td>
<td><img src="image" alt="Cucumbers" /></td>
<td><img src="image" alt="Onions" /></td>
<td><img src="image" alt="Carrots" /></td>
</tr>
</tbody>
</table>

### Tomatoes
![Tomatoes](image)

### Broccoli
![Broccoli](image)
Cucumber
That is what it is
Cucumber
Student's Journal
PLANTS NEED CORRECT AMOUNTS OF LIGHT.
Plants must have the right amount of sun to form the green food-making substance called chlorophyll. Experiment by clipping two circles of cardboard to the opposite sides of a growing green leaf. After three days remove the circles to see what happens when the light is shut off.

PLANTS NEED CORRECT AMOUNTS OF WATER.
Plants differ in the amounts of water they require. Experiment with three "flowering plants." Keep plant #1 slightly moist and water when it is dry one-half inch (1.27 cm) below the top of the soil. Clog up the drainage holes of #2. Water daily, allowing water to stand so the soil feels soggy. For plant #3 give absolutely no water at all.

PLANTS NEED THE CORRECT TEMPERATURE.
Plants adapt to a particular temperature range. Extremes in heat and cold will affect a plant's growth. Experiment by putting three plants in different temperatures—one in high heat, one in normal heat, and one in the freezer.

PLANTS NEED A GOOD SUPPLY OF OXYGEN.
Plants need good clean air! Smoke and smog affect plant growth, sometimes even killing the plant. Put one plant inside a plastic bag, push all the air out and tie the bag closed. In a second bag, have an adult release smoke into the bag and tie it.
For more information on this plant
go to Lowes.com/Plants #LSP0114

Considered a real delicacy, this butterhead has a small, somewhat loose head and a distinct flavor. Start early to avoid bolting to seed.

<table>
<thead>
<tr>
<th>Days to Germination</th>
<th>Days to Harvest</th>
<th>Planting Depth</th>
<th>Spacing: Row/Plant</th>
<th>Preserve By</th>
</tr>
</thead>
<tbody>
<tr>
<td>7 - 10</td>
<td>57</td>
<td>1/4 in.</td>
<td>18 in./10 in.</td>
<td>Fresh Use Only</td>
</tr>
</tbody>
</table>

Considerada una verdadera exquisitez, esta lechuga mantecosa tiene una cabeza pequeña, algo suelta y un sabor original. Comienza tempranamente a evitar florecer repentinamente.

<table>
<thead>
<tr>
<th>Días a Germinar</th>
<th>Días de Cosecha</th>
<th>Profundidad de Semillas</th>
<th>Espacio: Fila/Planta</th>
<th>Preservar</th>
</tr>
</thead>
<tbody>
<tr>
<td>7 - 10</td>
<td>57</td>
<td>6 mm</td>
<td>45 cm/25 cm</td>
<td>Fresco</td>
</tr>
</tbody>
</table>

After danger of frost, sow outdoors. Thin when plants are a few inches tall.

 Después del peligro de helada, siembre en exteriores. Reduzca cuando las plantas tienen unas cuantas pulgadas de alto.

©2006 Ferry-Morse Seed Co.
P.O. Box 1620
Fulton, KY USA 42041
www.ferry-morse.com
3/19/03  #10

April 7

Today when we looked at our garden we were amazed! Friday we planted broccoli. Today was Wednesday and they are already germinated and the cucumber are starting to bloom and the flowers are yellow.

[Hand-drawn diagram of flowers]
We planted our garden on February 6, 2008. They all took 5 days to germinate except the tomatoes and the lettuce and the onions and the carrots. The cucumbers were the first to germinate the tomatoes and the lettuce were 2nd onions were 3rd and the carrots were 4th. The cucumbers are the tallest they are 4" the tomatoes and the carrots and the onions are 2 1/2" and the lettuce is 2" there so many small snails in the garden we are going to have to put garlic on the dirt so the snails will not eat the plants. I planted the cucumbers because I like to eat pickles.
cucumber

tottes
Vegetable garden

All of the plants have grown. One inch they all are large very large especially the tomatoes and the cucumbers. The cucumbers are the tomatoes are 5” the carrots are 1” and so are the onions and the lettuce is 3” high.

Today there was not any snails and we are trying to get a plant back to life and we got locked out of the school again.
the garden

tomatoes

onions

carrots

lettus

cucumber

cucumber

lettus