



# Secondary Science Webinar

**PJ Duncan, Secondary Science Specialist**

**Penny Taylor, Healthy Schools Director**

**Don Whitehead, Senior Projects Architect**

## Webinar

- Everyone is muted
- Webinar is being recorded
- Questions: type in the question box. Please include the name of the person that you are addressing with your question if applicable.
- Questions will be addressed at the end of the webinar.
- If you are having trouble hearing the audio, please call (213) 929-4221 and enter
  - access code: 809-968-047

## Webinar Objectives

Participants will:

1. Understand what elements make up a Green School.
2. Learn at least three strategies to enhance environmental education at their school or district.
3. Be able to identify new contacts for resources and technical assistance.
4. Become aware of the new Florida Department of Environmental Protection school level awards program.

## Poll Question #1

- Let's answer a poll question!

## 3 Elements of a Green School

1. Reduced Environmental Impact and Costs
2. Improve the Health and Wellness of Students and Staff
3. Effective Environment and Sustainability Education
4. Referred to as the three pillars
5. Mirrors the 3 elements of sustainability; economics, social equity, education

## Poll Question #2

- Let's answer a poll question!

## **Pillar I – Don Whitehead, AIA, LEED AP**

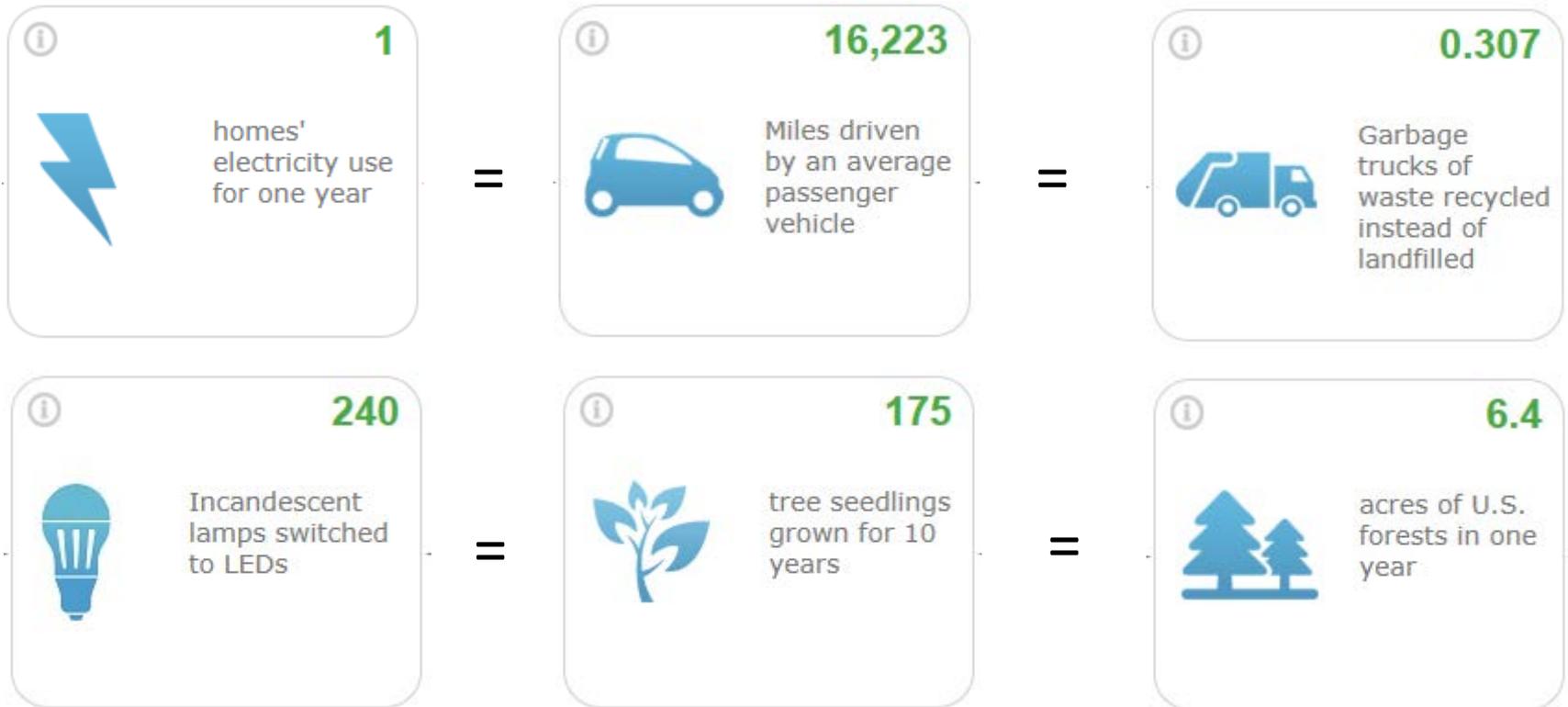
- Greenhouse gas emissions – reduced or eliminated
  - Cost-effective building energy efficiency improvements
  - On-site renewable energy and/or purchase of green power
- Water – conservation and improved quality
- Solid Waste – 3Rs – reuse, reduce, and recycle
  - Reduction or elimination of hazardous waste
- Alternative transportation
  - Energy-efficient buses, trucks, and/or cars
  - Carpool lanes and/or parking spaces
  - Biking or Walking

# Greenhouse Gases

Gases that trap heat in the atmosphere

- Carbon Dioxide ( $\text{CO}_2$ ) comes from burning of fossil fuels, solid waste and trees. Removed by plants.
- Methane ( $\text{CH}_4$ ) comes from fossil fuels, livestock and organic waste. Global Warming Potential =  $28\sim 36 \times \text{CO}_2$
- Nitrous Oxide ( $\text{N}_2\text{O}$ ) comes from agricultural, industry, fossil fuels and solid waste. GWP =  $265\sim 298 \times \text{CO}_2$
- Fluorinated gases (CFCs, HFCs, HCFCs, PFCs and  $\text{SF}_6$ ) come from industry. GWP = thousands to ten thousands

# Greenhouse Gas Equivalent (CO<sub>2</sub>e)



- CO<sub>2</sub>e calculation (2014 EPA Non-baseload output emission rate):
  - Eastern time zone of Florida: KWH x 0.00053452 MT/KWH = MT of CO<sub>2</sub>e
  - Central time zone of Florida: KWH x 0.00059457 MT/KWH = MT of CO<sub>2</sub>e

## Poll Question #3

- Let's answer a poll question!

## **Pillar II** – Penny Taylor, Director, Healthy Schools

Improved Health and Wellness of students and Staff

- ✓ United States Department of Education demonstrates support for Health and Wellness as part of the Green Ribbon Schools Recognition Program

U.S. DEPARTMENT OF EDUCATION

**Green**RibbonSchools



## Multi-agency and Organization Collaboration

- ✓ Florida Statute 1000.08 requires the Department of Education and Environmental Protection along with collaboration from additional partners to provide awards or recognition for green school outstanding efforts or achievements
- ✓ Florida Department's of Education, Health, Environmental Protection and Sustainable Florida Memorandum of Understanding establishes commitment to promote health and wellness as a part of the green school movement

# Florida Healthy District Designation

- ✓ Currently 43 of 67 of Florida districts recognized as Florida Healthy Districts

**Gold:** Baker, Duval, Lee, Leon, Nassau, Orange, Osceola, Palm Beach, Pinellas, Santa Rosa, Sarasota

**Silver:** Alachua, Brevard, Broward, Citrus, Clay, Collier, DeSoto, Escambia, Flagler, Hamilton, Indian River, Monroe, Okaloosa, Okeechobee, Pasco, Polk, Putnam, St. Johns, St. Lucie, Volusia

**Bronze:** Bay, Bradford, Franklin, Gadsden, Hernando, Lake, Madison, Manatee, Martin, Seminole, Sumter, Union

- ✓ Healthy School Teams required at all schools to create healthier school environments

## Poll Question #4

- Let's answer a poll question!

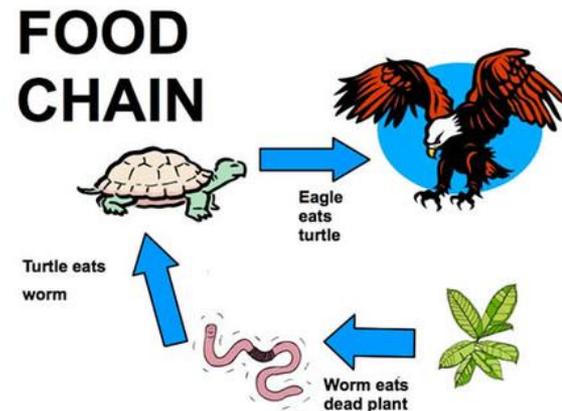
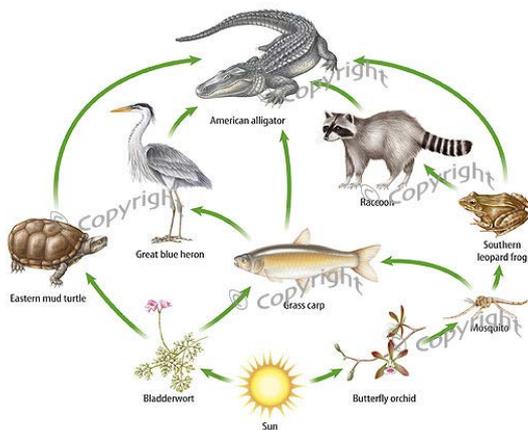
## **Pillar III – Effective Environment and Sustainability Education**

- Standards and Instructional Resources
- Environmental Science Standards
- Grade 7
- Biology

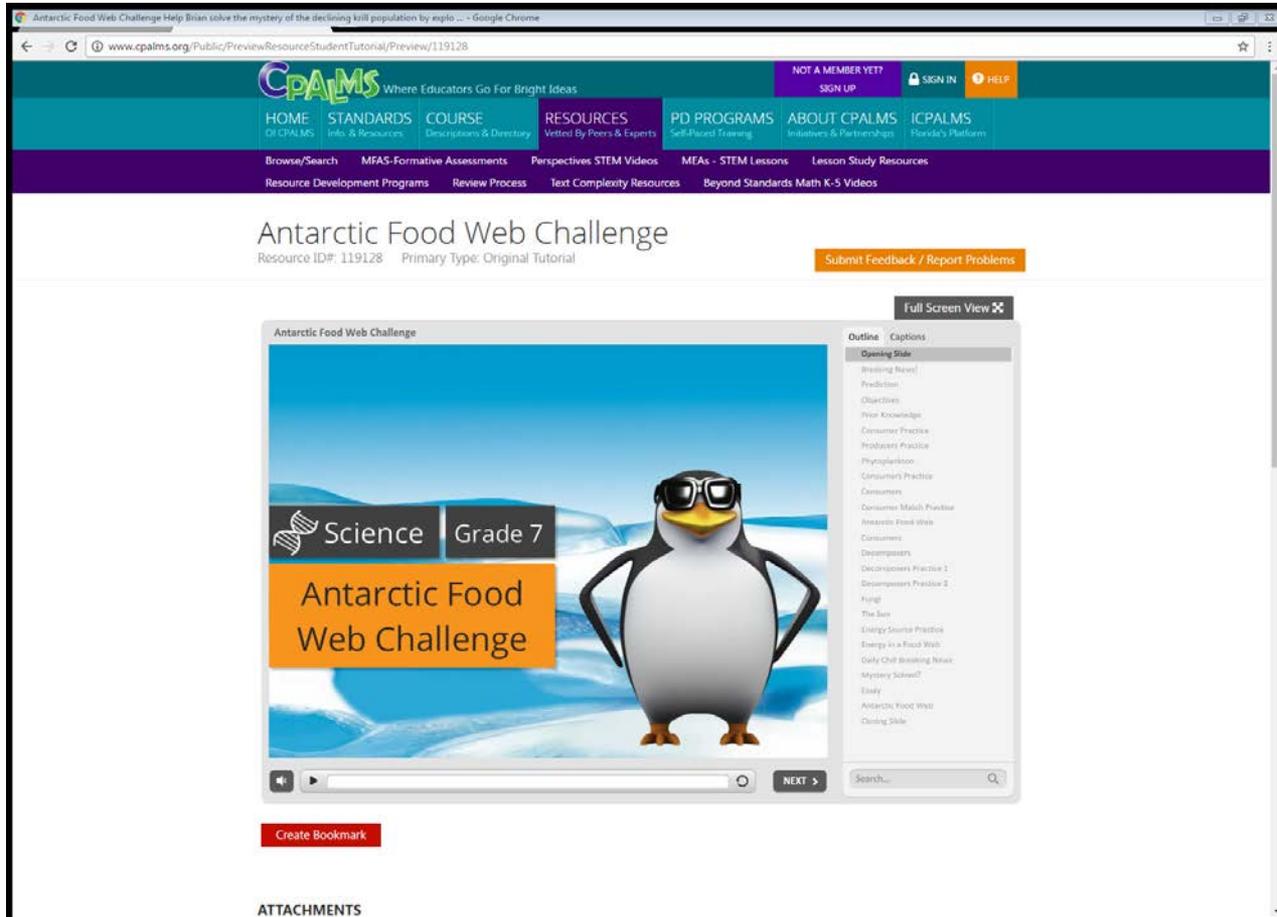
# Middle Grades Science Standard

## SC.7.L.17.1

Explain and illustrate the roles of and relationships among producers, consumers, and decomposers in the process of energy transfer in a food web.



# Original Tutorials – Floridastudents.org



Antarctic Food Web Challenge Help Brian solve the mystery of the declining kill population by mpto ... - Google Chrome

www.cpalms.org/Public/PreviewResourceStudentTutorial/Preview/119128

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Resource Development Programs Review Process Text Complexity Resources Beyond Standards Math K-5 Videos

## Antarctic Food Web Challenge

Resource ID#: 119128 Primary Type: Original Tutorial [Submit Feedback / Report Problems](#)

Full Screen View

Antarctic Food Web Challenge

Science Grade 7

### Antarctic Food Web Challenge



Outline Captions

- Opening Slide
- Breaking News!
- Prediction
- Objectives
- Prior Knowledge
- Consumer Practice
- Producer Practice
- Physiobion
- Consumer's Practice
- Consumer
- Consumer Math Practice
- Antarctic Food Web
- Consumers
- Decomposers
- Decomposers Practice 1
- Decomposers Practice 2
- Frigit
- The Sun
- Energy Source Practice
- Energy in a Food Web
- Daily Chit Breaking News
- Mystery Solved?
- Easy!
- Antarctic Food Web
- Closing Slide

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ATTACHMENTS



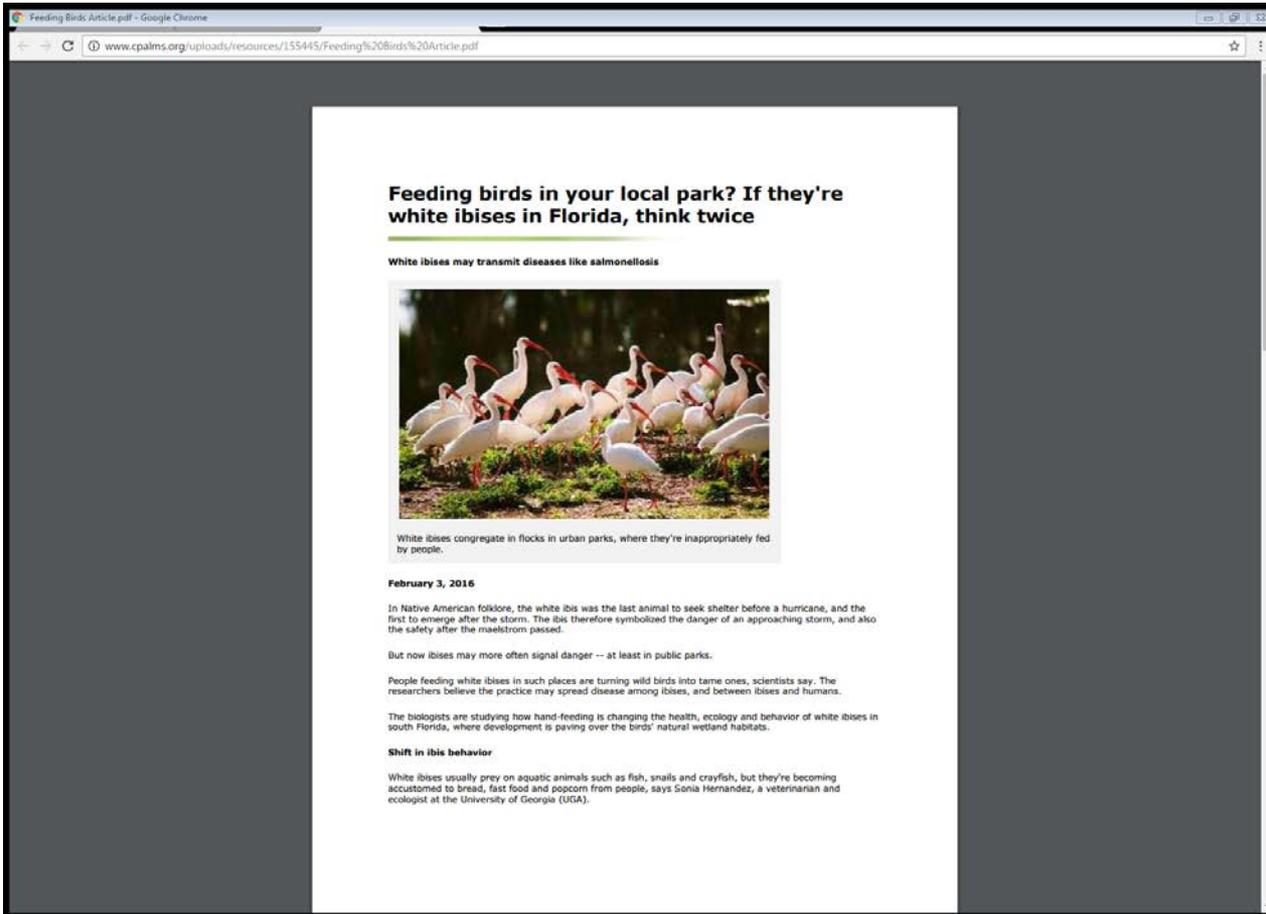
## Biology Standards

### **SC.912.L.17.20**

Predict the impact of individuals on environmental systems and examine how human lifestyles affect sustainability.

Annually assessed on Biology EOC. Also assesses SC.912.L.17.11, SC.912.L.17.13, SC.912.N.1.3.

# Text Resources – CPALMS.org



Feeding Birds Article.pdf - Google Chrome  
www.cpalms.org/uploads/resources/155445/Feeding%20Birds%20Article.pdf

## Feeding birds in your local park? If they're white ibises in Florida, think twice

White ibises may transmit diseases like salmonellosis



White ibises congregate in flocks in urban parks, where they're inappropriately fed by people.

**February 3, 2016**

In Native American folklore, the white ibis was the last animal to seek shelter before a hurricane, and the first to emerge after the storm. The ibis therefore symbolized the danger of an approaching storm, and also the safety after the maelstrom passed.

But now ibises may more often signal danger -- at least in public parks.

People feeding white ibises in such places are turning wild birds into tame ones, scientists say. The researchers believe the practice may spread disease among ibises, and between ibises and humans.

The biologists are studying how hand-feeding is changing the health, ecology and behavior of white ibises in south Florida, where development is paving over the birds' natural wetland habitats.

**Shift in ibis behavior**

White ibises usually prey on aquatic animals such as fish, snails and crayfish, but they're becoming accustomed to bread, fast food and popcorn from people, says Sonia Hernandez, a veterinarian and ecologist at the University of Georgia (UGA).



**Text Complexity Analysis of**  
 "Feeding birds in your local park? If they're white ibises in Florida, think twice" (title)  
 Dybas & Martin (author)  
**Recommended Complexity Band:**

**Qualitative Measures**

**Meaning/Purpose:** (Briefly explain the levels of meaning (Literary Text) or purpose (Informational text).)  
 The purpose of this text is to inform the reader about how wildlife, specifically White ibises, and humans interact and impact each other. The purpose of the article is implied in the title but is not specifically stated. The information in the article is not sequentially laid out, but is well organized and easy to follow.

**Text Structure:** (Briefly describe the structure, organization, and other features of the text.) The text begins with an introduction to White ibises and a brief description of recent shifts in their behavior. The article then describes how the changes in the birds' behavior impacts the birds and the humans with whom they interact. The author further broadens the discussion and describes how all wildlife is impacted by urbanization before returning to the White ibises and describing how scientists are studying the situation.

**Language Features:** (Briefly describe the conventions and clarity of the language used in the text, including the complexity of the vocabulary and sentence structures.) The text is largely explicit with some abstract language (signal danger, enliven our cities, feces, macstrom). There are also quite a few subject-specific terms in the article (ecology, wetland habitats, prey, bacteria, strains, pathogens, nomadic, urbanization) that may be unfamiliar to students.

**Knowledge Demands:** (Briefly describe the knowledge demands the text requires of students.) The article discusses mostly focuses on everyday practical knowledge, but there are some references to subject-specific content. Students do need to have a basic understanding of habitats, ecosystems, and the interactions between organisms in these ecosystems.

**Recommended Placement**

Briefly explain the recommended placement of the text in a particular grade band. This article was placed in the 11-CCR grade band by the Lexile measure, but the Qualitative Measure Analysis determined the appropriate placement for this article to be the 9-10 grade band based on the level of subject knowledge necessary. Students who are lacking some of the required background knowledge (see Considerations for Reader and Task) may find this reading to be challenging.

Reviewed by: Melissa Stanke, St Johns County School District, 3/24/2016

**Text Description**

**Briefly describe the text:** This text describes the interactions between local wildlife (White ibises in Florida) and humans, and the impact that these interactions have on both species. The article presents both benefits as well as potential drawbacks to the close proximity of humans and white ibises. The article also describes how scientists are studying these interactions and their effects.

**Quantitative Measure**

**Complexity Band Level** (provide range): 11-CCR

**Lexile or Other Quantitative Measure of the Text:** 1330L. This is an unofficial Lexile measure based on an 800+ word portion of the text.

**Considerations for Reader and Task**

Below are factors to consider with respect to the reader and task.

**Potential Challenges this Text Poses:**  
 The article mainly discusses general everyday knowledge, but students do need to have a basic understanding of ecosystems, evolution, and the transmission of diseases. Students will be expected to have a basic understanding of diseases (how they are spread and some vocabulary related to diseases). Teachers may need to provide resources for students to develop this understanding. Struggling readers may have difficulties following the text as it is not sequential. Teachers will need to scaffold the text to aid in student understanding. There are some instances of abstract language (see Language Features) that teachers must be aware of in order to address student questions.





# Qualitative Rubric

Feeding Birds Qualitative Rubric.pdf - Google Chrome  
www.cpalms.org/uploads/resources/155445/Feeding%20Birds%20Qualitative%20Rubric.pdf

**Text Complexity: Qualitative Measures Rubric for Informational Text**  
Feeding birds in your local park? If they're white ibises  
Text Title in Florida, think twice Text Author Cheryl Dybas & Sandi Martin

QUALITATIVE	Very Complex			Slightly Complex
<b>PURPOSE</b>	<input type="checkbox"/> Purpose: Subtle, implied, difficult to determine; intricate, theoretical elements	<input type="checkbox"/> Purpose: Implied, but fairly easy to identify; more theoretical than concrete	<input checked="" type="checkbox"/> Purpose: Implied, but easy to identify based upon context or source	<input type="checkbox"/> Purpose: Explicitly stated; clear, concrete with a narrow focus
<b>TEXT STRUCTURE</b>	<input type="checkbox"/> Organization of Main Ideas: Connections between an extensive range of ideas or events are deep, intricate and often implicit or subtle; organization of the text is intricate and specialized for a particular discipline <input type="checkbox"/> Text Features: If used, are essential in understanding content <input type="checkbox"/> Use of Graphics: If used, extensive, intricate, essential integrated graphics, tables, charts, etc., necessary to make meaning of text; also may provide information not otherwise conveyed in the text	<input checked="" type="checkbox"/> Organization of Main Ideas: Connections between an expanded range of ideas, processes or events are deeper and often implicit or subtle; organization may contain multiple pathways and may exhibit traits common to a specific discipline <input type="checkbox"/> Text Features: If used, greatly enhance the reader's understanding of content <input type="checkbox"/> Use of Graphics: If used, essential integrated graphics, tables, charts, etc. may occasionally be essential to understanding the text	<input type="checkbox"/> Organization of Main Ideas: Connections between some ideas or events are implicit or subtle; organization is evident and generally sequential <input type="checkbox"/> Text Features: If used, enhance the reader's understanding of content <input checked="" type="checkbox"/> Use of Graphics: If used, graphics mostly supplementary to understanding of the text, such as indexes, glossaries, graphs, pictures, tables, and charts directly support the text	<input type="checkbox"/> Organization of Main Ideas: Connections between ideas, processes or events are explicit and clear; organization of text is clear or chronological or easy to predict <input type="checkbox"/> Text Features: If used, help the reader navigate and understand content but are not essential <input checked="" type="checkbox"/> Use of Graphics: If used, simple graphics, unnecessary to understanding the text but directly support and assist in interpreting the written text
<b>LANGUAGE FEATURES</b>	<input type="checkbox"/> Conventioneality: Dense and complex; contains abstract, ironic, and/or figurative language <input type="checkbox"/> Vocabulary: Generally unfamiliar, archaic, subject-specific, or overly academic; language may be ambiguous or purposefully misleading <input type="checkbox"/> Sentence Structure: Mainly complex sentences often containing multiple concepts	<input type="checkbox"/> Conventioneality: Complex; contains some abstract, ironic, and/or figurative language <input type="checkbox"/> Vocabulary: Somewhat complex language that is sometimes unfamiliar, archaic, subject-specific, or overly academic <input type="checkbox"/> Sentence Structure: Many complex sentences with several subordinate phrases or clauses and transitional words	<input checked="" type="checkbox"/> Conventioneality: Largely explicit and easy to understand with some occasions for more complex meaning <input type="checkbox"/> Vocabulary: Mostly contemporary, familiar, conversational; rarely unfamiliar or overly academic <input checked="" type="checkbox"/> Sentence Structure: Simple and compound sentences, with some more complex constructions	<input type="checkbox"/> Conventioneality: Explicit, literal, straightforward, easy to understand <input type="checkbox"/> Vocabulary: Contemporary, familiar, conversational language <input type="checkbox"/> Sentence Structure: Mainly simple sentences
<b>KNOWLEDGE DEMANDS</b>	<input type="checkbox"/> Subject Matter Knowledge: Extensive, perhaps specialized or even theoretical discipline-specific content knowledge; range of challenging abstract and theoretical concepts <input type="checkbox"/> Intertextuality: Many references or allusions to other texts or outside ideas, theories, etc.	<input type="checkbox"/> Subject Matter Knowledge: Moderate levels of discipline-specific content knowledge; some theoretical knowledge may enhance understanding; range of recognizable ideas and challenging abstract concepts <input type="checkbox"/> Intertextuality: Some references or allusions to other texts or outside ideas, theories, etc.	<input checked="" type="checkbox"/> Subject Matter Knowledge: Everyday practical knowledge and some discipline-specific content knowledge; both simple and more complicated, abstract ideas <input checked="" type="checkbox"/> Intertextuality: A few references or allusions to other texts or outside ideas, theories, etc.	<input type="checkbox"/> Subject Matter Knowledge: Everyday, practical knowledge; simple, concrete ideas <input type="checkbox"/> Intertextuality: No references or allusions to other texts, or outside ideas, theories, etc.

**Questions to Consider in Planning for Instructional Scaffolding of Informational Text**

Purpose:

- Would spending time helping students to establish a purpose for reading this text be appropriate?
- Will students know in advance what they are expected to do with the information they gain from reading this text?





Feeding Birds Text-Dependent Questions (1) - Word

FILE HOME INSERT DESIGN PAGE LAYOUT REFERENCES MAILINGS REVIEW VIEW

Document Formatting

Name: \_\_\_\_\_ Date: \_\_\_\_\_

**Text-Dependent Questions and Writing Prompt for Complex Text**

**Article Title:** “Feeding birds in your local park? If they’re white ibises in Florida, think twice.”

**Vocabulary Questions:**

1. What is the meaning of the phrase, “model for managing” as used in paragraph 11?
2. In paragraph 19, the author states, “Increasing numbers of ibises in urban parks facilitate contact with animals the ibises wouldn’t normally encounter.” Explain the meaning of the term “facilitate” based on this context.

**Text Evidence/Content Questions:**

1. In paragraph 2, the author states, “But now ibises may more often signal danger.” Explain what the author means by this phrase.
2. The study examined in the article analyzes the differences between birds located in urban areas and birds located in natural areas. Why are these researchers more concerned with the urban birds than those in their wild habitat? Cite specific evidence from the text.
3. The author continuously references the many ways in which white ibises influence other organisms in their environment, but humans also play a role in the connections within this ecosystem. Based on the text, how are humans altering the lives of white ibises?
4. In paragraph 10, the author states, “Our interactions with wildlife can enliven our cities.” What does the author mean by this statement, and why did the author chose to include this phrase?

**Writing Prompt:** *Imagine that you are the manager of a local park in Palm Beach, Florida. A community member has begun complaining about the number of birds at the park. Write a multi-paragraph response to the community member that either supports the protection of or removal of wild birds in the park. Be sure to include both positive and negative consequences of having the birds at the park in your response.*

PAGE 1 OF 1 293 WORDS 100%

# Outdoor Lab Aquaculture & Traditional Garden Beds



## Brevard Highlights

- Surfside Elementary, Erika Maier
- Manatee Elementary, Marcia Booth



Erika Maier with  
her favorite goat  
Buttercup!

# SURFSIDE ELEMENTARY

Satellite Beach, FL

# Small School - Big Impact

This beachside school is a model for saving the planet through

- ▶ innovative outdoor learning spaces,
- ▶ creative environmental education programs
- ▶ active community involvement and partnerships such as

## 1. Brevard County Extension Office

Air Force Honor Guard

Businesses like Lowes, Sun Harbour Nursery, Ground Tec, Baker Creek

VOLUNTEERS! Parents, Grandparents, Master Gardeners

- ▶ Community outreach, such as Brevard Zoo Mangrove Restoration, carries our influence beyond our school.

# Hands On Environmental Education every subject, at every grade level

- ▶ Extensive Campus Wildlife Native Gardens
- ▶ Poultry Coop
- ▶ Grade Level Gardens



These allow teachers to combine academic achievement, nutrition, garden science, physical activity, food preparation and fresh vegetable tastings to improve the health and wellness of children, families, and the school community.

Every subject, including art, is a chance to talk about sustainability and the environment. Using a **multidisciplinary** approach, Surfside weaves in reading, writing and mathematics opportunities into every environmental education lesson.

Need FREE Curriculum ideas?

Project Learning Tree

Junior Master Gardener

Livestock Conservancy



# What Motivates Kids? Food!!!!!!

(and baby animals)

Kids are willing to work hard in the garden (and in class) if they can eat what they sow or have time with baby chicks.

All grade levels celebrate with salads, salsa, soup and quiche when their gardens are ready to harvest. Our after school 4-H Club helps maintain a large Farm at Wickham Park with 250 ducks, chicks, turkeys, geese and 3 dairy goats that come to school to visit.



The beautiful gardens become a gathering point for parents, students and teachers, as well as helping to beautify the campus. Students plant heirloom unusual seeds such as amaranth and the entire campus is organic.



But nothing is more beautiful than the rare, heritage poultry that we hatch. Students study the importance of these rare breeds from their historic status to their genetic significance. Many of these beautiful animals have unique traits and skills. Their genetically based, complex characteristics are no longer found in commercial breeds today.



## How We Grow Together

Students work in the gardens and are engaged in hands-on life science projects with insects and poultry that are supported through not just curriculum and lesson plans but with community volunteers, business partners and technology resources. Our entire campus is an outdoor learning experience that brings all of us together.



# Erika Maier



Phone:  
Mobile:

## **Erika Maier**

Surfside GSP Teacher,

Fantastic Farm 4-H Club Leader

[maier.erika@brevardschools.org](mailto:maier.erika@brevardschools.org)

321-773-2818 ext. 247



Like us on Facebook

# Manatee Elementary

A 2015 U.S. Dept. of Education  
Green Ribbon School

Marcia Booth  
Parent Volunteer

# Manatee Elementary

- **Located in Viera**
- **About 900 students and 45 teachers**
- **Environmental Club (E-Club) for 1<sup>st</sup> through 3<sup>rd</sup> grade students created in 2012**
- **Green Committee created as part of the school's PTO in 2013**
- **2015 U.S. Department of Education Green Ribbon School Award**

U.S. DEPARTMENT OF EDUCATION

GreenRibbonSchools



Parent Influence on Green Initiatives



**Pillar I**  
**Reduced Environmental Impact and Costs**

- Comprehensive recycling program throughout the school including in the classrooms
- Alternative recycling programs (TerraCycle, Printer Cartridges, e-Waste)
- Collection Corner for awareness and greater participation in programs
- Greener events
- Collection of gently-used classroom supplies



## Pillar II Improved Health and Wellness

- Morning Mile for all grades
- Thinga-ma-Jogger 5K for school and community
- Team Lorax for the 5K
- Shade structure for playground
- Trees around campus
- Sun Protection relay
- Access to Manatee Meadow during lunch
- Hopscotch & Tic-Tac-Toe in the Meadow
- Green Apple Day of Service



### Pillar III Effective Environmental and Sustainability Education

- Be smart from the Start
- Green Ambassadors
- Butterfly Garden
- Manatee Meadow outdoor classroom
- Environmental Club for grades 1-3
- Green News Crew
- Paperless Student Council elections
- Half-way to Earth Day
- Be Earth's Valentine
- Earth Day
- Field Trips
- Educational games at school events

## Manatee Elementary Green Committee Team



- Create by PTO in 2013; chaired by Marcia Booth
- Goal: work together - families, students, staff, and teachers - towards making Manatee Elementary a greener school
- 2017: From one member to seven, plus two teachers; in the process of getting 6<sup>th</sup> grade students involved
- Other volunteers assist with projects and activities
- Projects expanded to community – e.g. e-waste collection; donation of gently-used supplies; Green Apple Day of service

# Green Committee Projects



## Manatee Elementary Environmental Club



- Started by Mrs. Forester and Mrs. Tolley (teacher sponsors) and Marcia Booth in 2012
- A 45-minute after school program for 1<sup>st</sup> through 3<sup>rd</sup> graders
- Meetings are twice a month
- Goal: educate and raise awareness on various environmental topics , especially in our community, to inspire kids to become stewards for the environment
- Involve families as well as local organizations (e.g. field trips, guest speakers, hands-on projects)
- Projects focus on school and local community– e.g. weeding and gardening on campus; campus clean up; Jane Goodall community mapping (Indian River Lagoon); keyhole garden for the Meadow

# E-Club Projects



*Only if we understand  
can we care.  
Only if we care will we  
help.*

*...  
Change happens by  
listening and then  
starting a dialogue with  
the people who are doing  
something you don't  
believe is right.*

*~ Jane Goodall*



*Every individual matters.  
Every individual has a  
role to play.  
Every individual makes a  
difference.*

*...  
What you do makes a  
difference and you have  
to decide what kind of  
difference you want to  
make.*

*~ Jane Goodall*

**Thank You!**

# Contact Information

- **Manatee Elementary School**  
**3425 Viera Blvd - Viera, FL 32940**  
**(321) 433-0050**

[ManateeGreenCommittee](#)



- **Marcia Booth**  
[marcia@RecycleBrevard.org](mailto:marcia@RecycleBrevard.org)  
**305-479-4514**

# Air Base K-8 Center



ENVIRONMENTAL AMBASSADORS



Green Kick-Off Assemblies



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Green Pledge/Promise Tree

Air Base K-8 Promise Tree Environmental Ambassadors



*The Promise Tree*

Air Base K-8 students have placed their Promise Flags on our Promise Tree. By doing so it gives the wind the opportunity to move the Promise Flags.

The wind is considered an expression of our minds, and the mental energy which activates them. Thus, the wind, like the mind, will carry the message of every flag throughout the countryside, and across the world.

Cool Roof Pilot



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Compostable Plate Pilot  
Stop Styrofoam Trays



Carton Recycling Pilot



No More Plastic  
Milk & Juice Bags

Air Vent Sealing Project





## NEWSLETTER



### STUDENT LEADERS

## Lessons Learned by Elementary Students through the Green Schools Challenge



"My experience with the Green Schools Challenge has helped me to understand how the environment works and to know that we as humans can not only help but also hurt the natural environment. For example, the big impact we can have by changing our everyday habits to save energy and reduce our carbon footprint have taught me a lot and I hope I can share it with the world"

Statement made Jessie Riviera, 5th grader at Air Base Elementary



"During 4th and 5th grade, I learned a lot about the environment through my involvement with the Green Schools Challenge and I am now determined to take care of it. Learning from the health benefits of organic gardening to energy saving projects and special events like green education fairs have inspired me to stand up, make a difference in our community, and help the world stay green. I continue to be involved in numerous environmental projects and appreciate that little things I do can have a big impact like convincing my friends to be a green consumer, save energy and to recycle. At Air Base Elementary our motto was 'Think Green, Do Green, Be Green', I'm proud to say it still is!"

Statement made by Paola Gerena, former Air Base Elementary student now a 7th grader at C.O.A.S.T.

# International and National Involvement

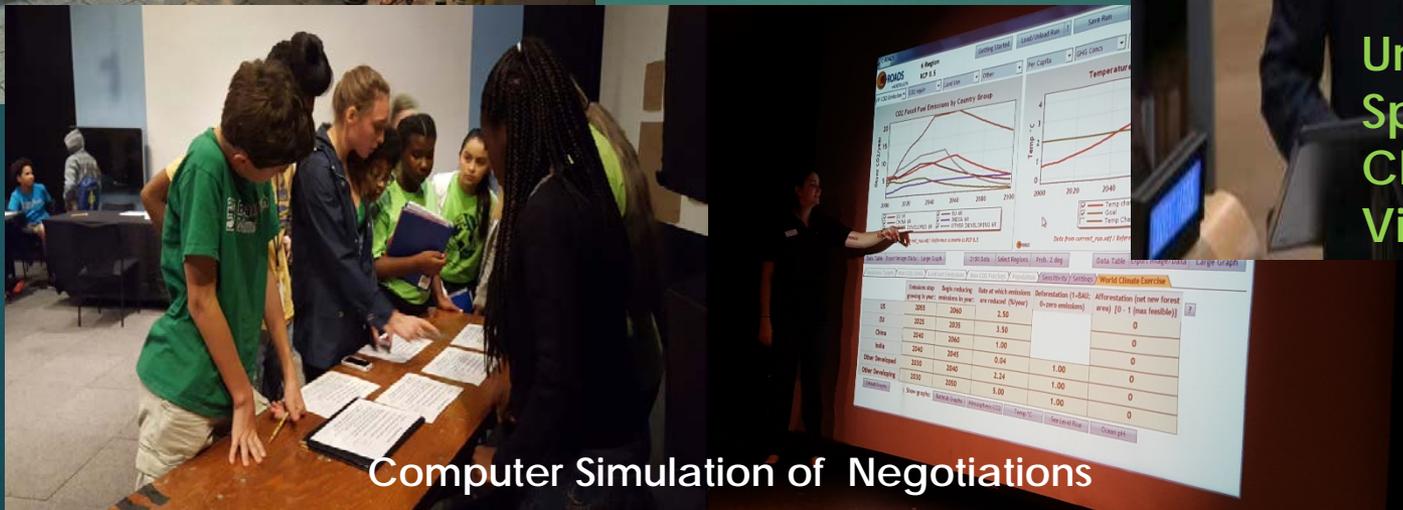


White House Initiative

Mock United Nations  
Climate Change Talks  
During  
COP21 in Paris, France



United Nations  
Speaker on  
Climate Change  
Video



Computer Simulation of Negotiations

Hannah Purcell  
K-12 Spirit of Service Learning Winner

Activities

1. Green Ranger Program
2. Green Kick-Off Assemblies (3) and Pledge Tree
3. Green Education Fair
4. United Nations World Climate Change Project
5. No Plastic Is Fantastic Campaign
6. Carton Recycling Pilot School
7. Deering's Nurturing Environmental Stewards of Today and Tomorrow (N.E.S.T.T.) Program
8. Global Scholars Program
9. Natural Area Extension of Outdoor Classroom



Schoolwide Activities

1. Green Kick-Off Assemblies (primary, intermediate, Upper Academy)
2. Green Pledge Tree
3. Green Education Fair
4. Promote participation in green programs, events
5. Special events
6. Obtain grants, donations, resources-awarded Target grant for NESTT field trip
7. Communication (announcements, Connect-Ed, Twitter, website, flyers, newsletters, e-mail, posters, meetings, special events, etc.)

Green Team Participation

Students: 40  
Teachers: 30  
Facilities staff: 4  
Administration: 5

How many green initiatives/activities did the team complete?

80

How many people were educated through these initiatives/activities?

Students: 1,015	Parents/family: 900
Teachers: 90	Community residents: 40
School staff: 65	National & International: 83

Families, School, Community, National, International



One Earth, One Home

6<sup>th</sup> teaching elementary



N.E.S.T.T. Program

School Site  
and  
Field Trips



R. E. F. Expo/Education

Student/Teacher Presenters, F.I.U.

# Homestead Air Reserve Base

Students get up close and personal with Homestead ARB's environmental attractions

Posted 5/17/2013 Updated 5/17/2013



# Active In Community



# Fairchild Challenge Youth Can Presenters

02/08/2013



by Senior Airman Nicholas Caceres  
482nd Fighter Wing Public Affairs

5/17/2013 - HOMESTEAD AIR RESERVE BASE, Fla. -- Students from Homestead, Fla.'s Air Base Elementary Green Team got a chance to learn about the environment during a base tour here May 13.

The environmental tour was conducted as an educational experience for the school's Green Team in conjunction with Earth Day. The team includes more than 25 children, from grades three through five, who are part of the environmentally focused school club.

The tour began with tree planting at the Pine Rockland Restoration Site on base. There, the students assisted in replanting 10 kinds of tree species native to Florida, including the South Florida Slash Pine (also known as Dade County Pine) and the Coontie. The Coontie is only found in South Florida Slash Pine habitats and is the sole host plant for the Atala butterfly.



# U.S. Mint - Everglades Coin



# Community Eco-Fair

AIR BASE  
ELEMENTARY  
A WORLD OF  
KNOWLEDGE  
AWAITS YOUR CHILD

Environmental  
Ambassadors  
of Air Base K-8

Nurturing Environmental Stewards of Today & Tomorrow



NESTT Program, Deering Estates

Encounters in Excellence  
Narrated Nature Documentaries



Green Education Fair ~  
Learning from Experts

U. S. Green Building Council,  
Ernst & Young



Zoo Magnet High School



# United Trashing of America



Became  
United Greening of America,  
Our Green Kick-Off Theme

# Drone picture of students spelling out Recycle in English, French and Spanish



# Recycling Shoes for Children in Africa

## SHOE DRIVE

First Grade is initiating a school wide shoe drive to benefit families in **AFRICA**. Send in any unwanted new and used shoes and they will be recycled and repurposed for needy families in **AFRICA**.

Our goal is to fill 300 bags with 25 pairs of shoes in each bag. We know Air Base can do it!

Collection bins will be located throughout the school until March 10, 2017.



## Cultural Festivals

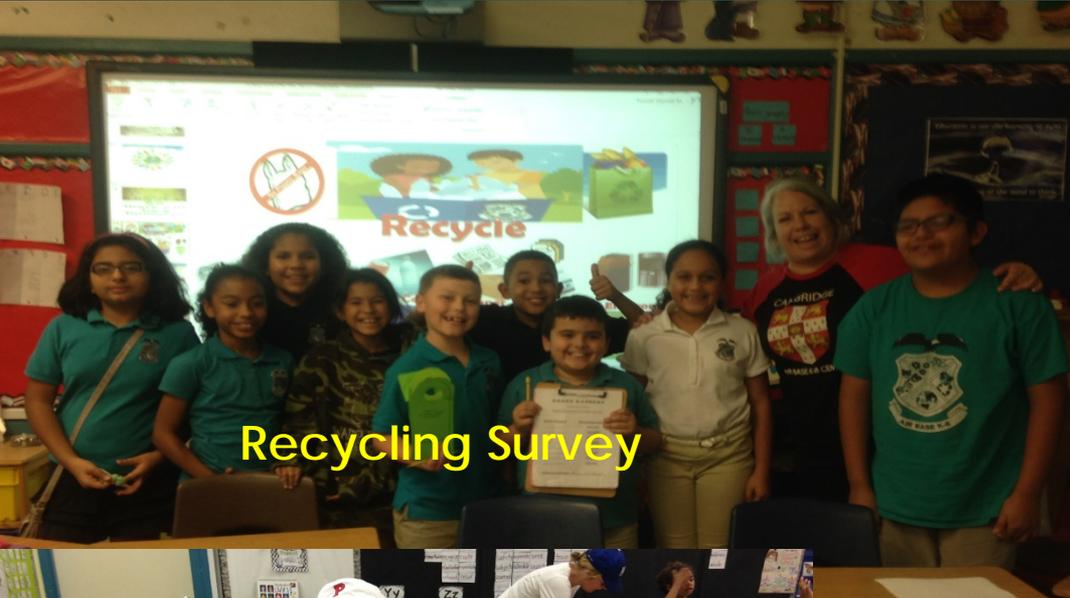
Chilean Ponchos, Hats and Rainsticks  
out of Recycled Materials.  
**GO GREEN!**

## Upcycle Exhibit

Coral Gables Museum

## Holidays





Recycling Survey



Solar Ovens from Pizza Boxes



Recycling Juice Pouches

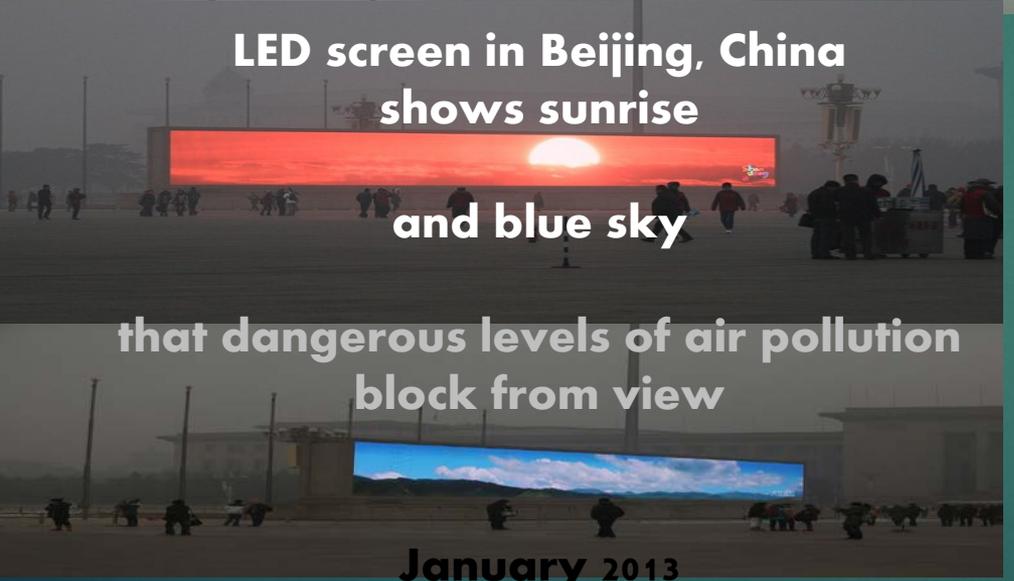


Cultural Festival Costumes

11/15/2013 11:16



Sealing leaky windows



LED screen in Beijing, China shows sunrise and blue sky

that dangerous levels of air pollution block from view

January 2013

E  
N  
E  
R  
G  
Y



Lightbulb, Showerhead

Exchange

**13-year-old makes clean energy for \$5.00**



**"America's Top Scientist" and \$25,000. prize**





# Our Green Rangers



Will help us to

Think Green



Do Green



Be Green



by:



1. Turning off a/c, lights and computers when leaving or not needed



2. Recycling paper, cardboard, plastic, cans, ink, electronics in correct bins



3. Cutting paper towels in half



4. Closing bathroom door



5. Turning off water faucets

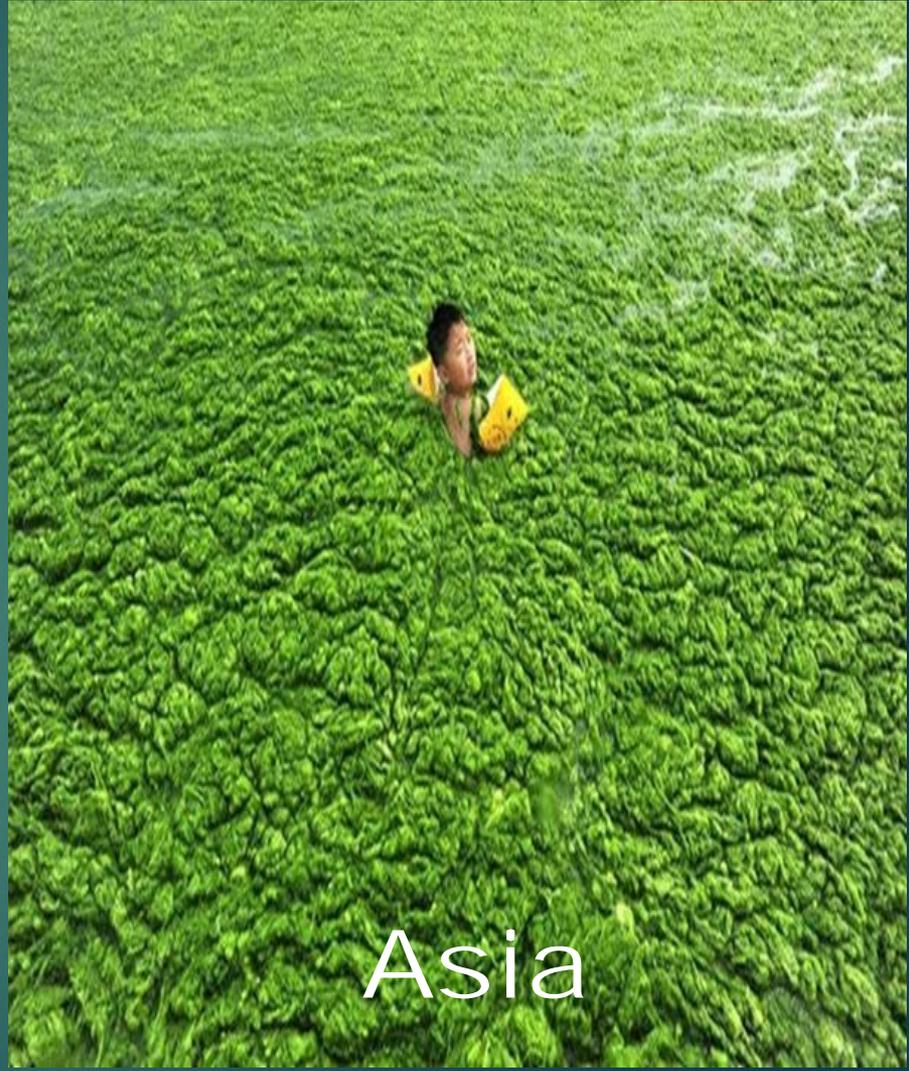
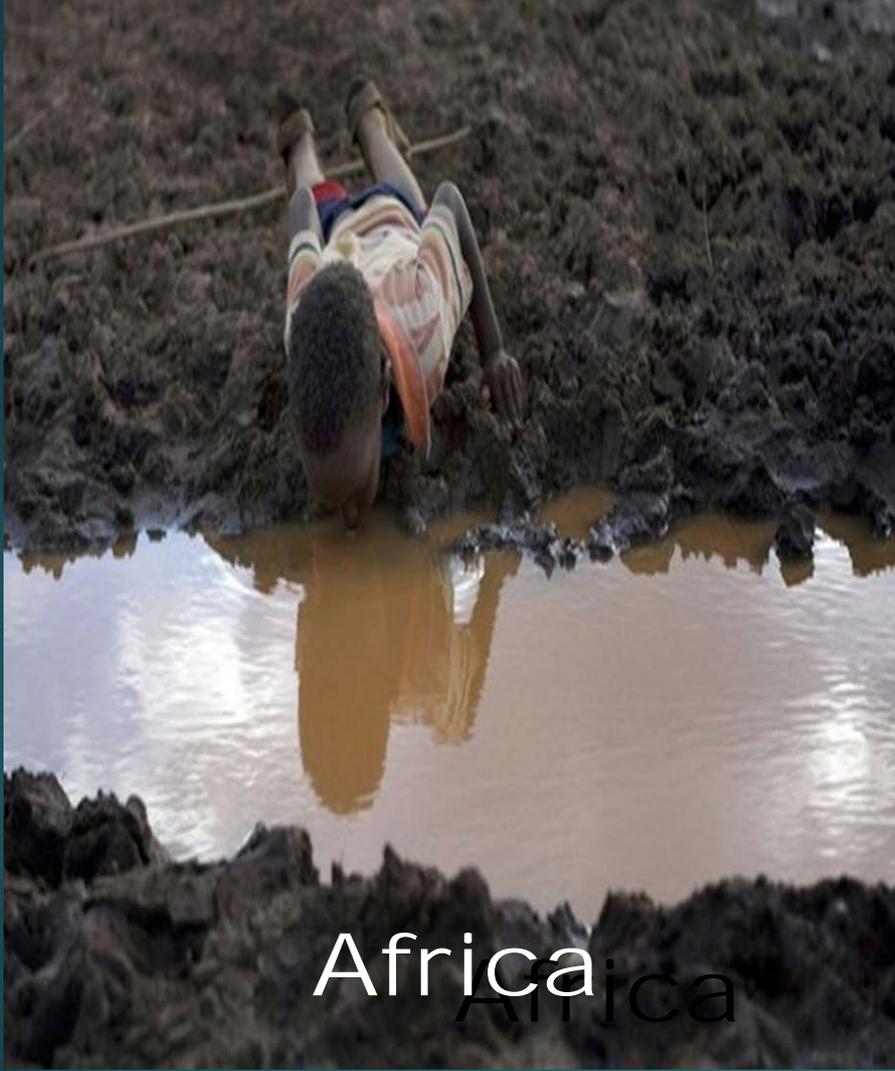


Hybrid Trucks, Cars



Solar

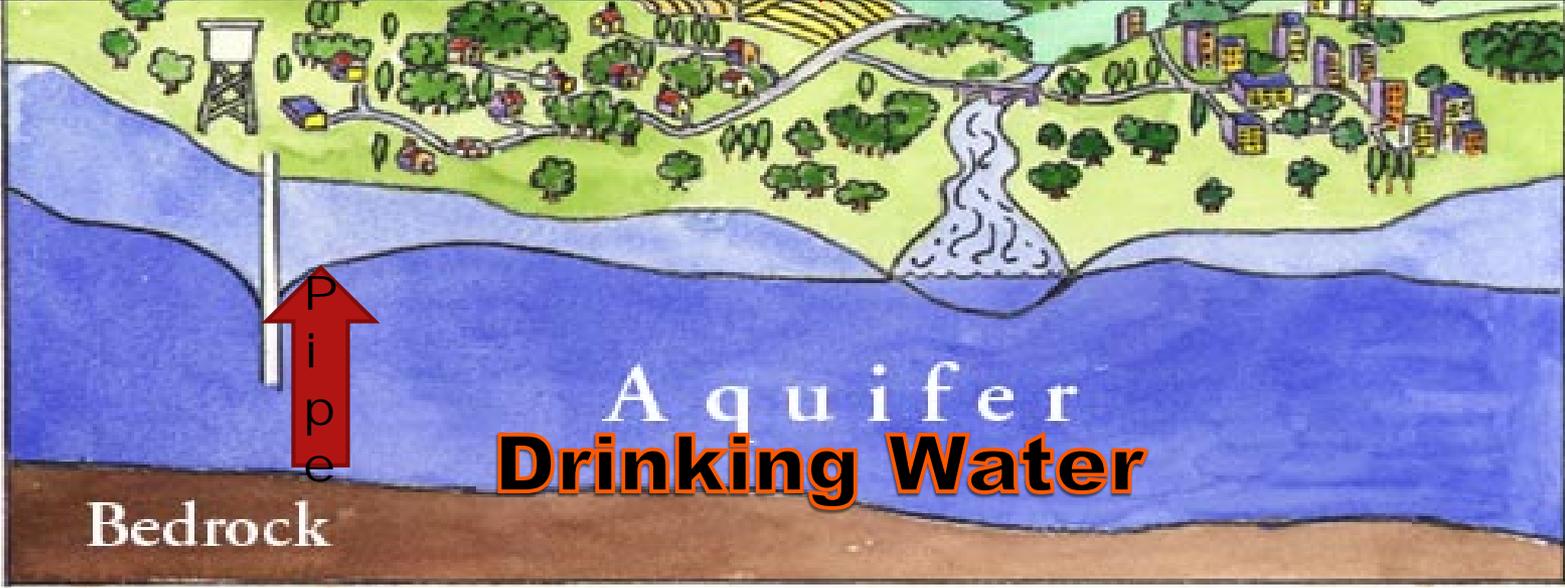
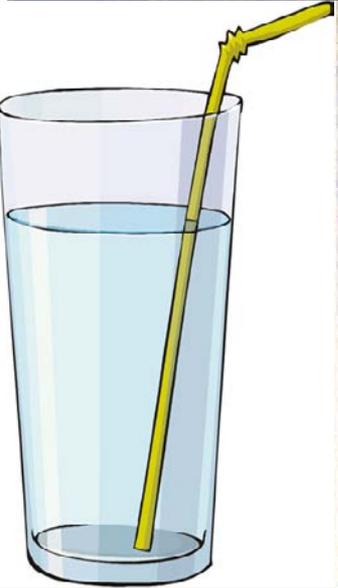




# Run off - Pollution



into  
our  
water



Aquifer  
**Drinking Water**

Bedrock

P  
i  
p  
e

**Food Grows Where Water Flows**

Learning About Real World Problems and Solutions to Empower

Westside Farm = Lost  
**NO WATER** = Jobs  
Families Protecting the Valley.com • Water For All.com





Aerators for school



Water Bottle Station



Water Contest



Bronze School



Save Water Mascot

Active Research  
Endangered Bat

Learning  
from  
Experts



Learning  
from  
Each Other



Interdisciplinary  
Real World  
Problem/Solution  
Hands-On  
Engaging  
Empowering

Ecosystems and Organic Food Gardens  
Green Education

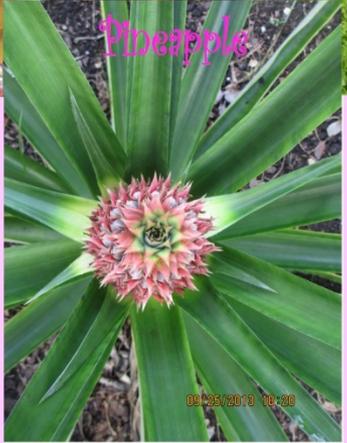
# Learning Gardens Living Laboratories



Organic Juice

Sustainable Farm

Healthy  
For Us  
And  
Our Earth



Pineapple

Easy and Fun  
to Grow  
  
Great Taste  
  
Save Money



Coontie/Atala Ecosystem Restoration

Hatched Eggs

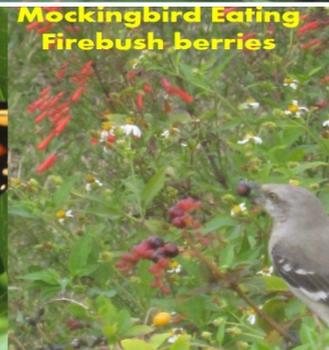
Newborn Atala Butterflies



Harvesting  
Milkweed Seeds



Monarch ~ Milkweed



Mockingbird Eating  
Firebush berries



Helping Others

Pineland Preserve



Zebra Caterpillar

Corky-Stemmed  
Passionflower



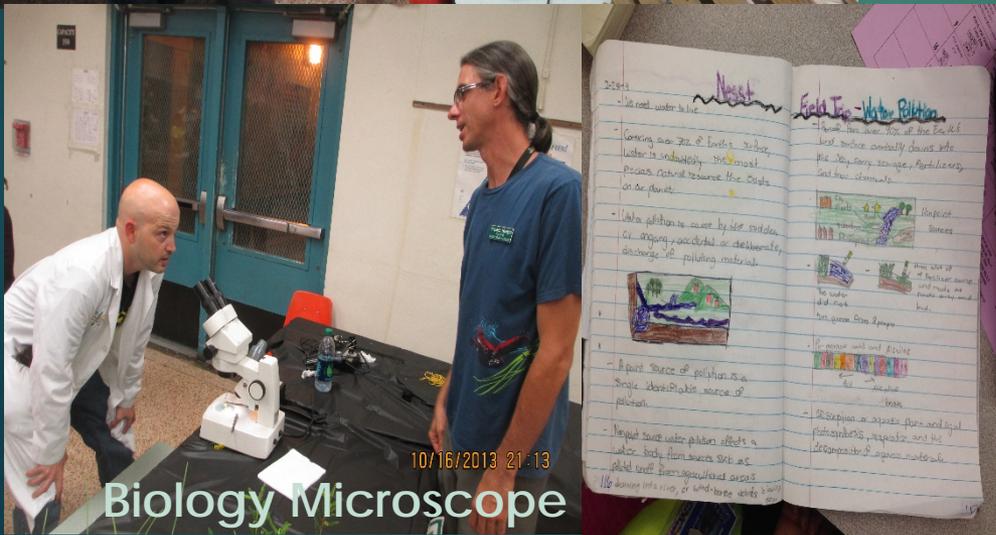
Lobster Fishing

10/17/2012

# Tools Of the Trade



Coral Reef Restoration



10/16/2013 21:13

Biology Microscope

Notes

Water Pollution

The most water in the world comes from the top of the Earth and surface water eventually flows into the oceans, seas, and lakes. The water is not clean because of the things that we put into it.

Water pollution is caused by the things that we put into the water. It is not good for the water and the things that live in it.

A point source of pollution is a single identifiable source of pollution.

Nonpoint source pollution affects a larger body of water. It is not from a single source. It is from many sources. It is from the things that we put into the water.

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Organic Herbs

FREE

Air Base Elementary & ABC Grow Market

## Linda Gancitano - Broward

- Go to the link below to access Linda's presentation
- [20171How Low Challenge presentation for PJ\(1\).pptx](#)



# Overview

The Florida Green School Designation Program is a voluntary initiative of the Florida Department of Environmental Protection (DEP) that designates and recognizes schools that make a commitment to conserve and protect Florida's natural resources.



The Program's environmental guidelines allow Florida primary and secondary schools to evaluate its operations, set goals and take specific actions to continuously improve environmental performance.

[www.dep.state.fl.us/osi/green-school-designation](http://www.dep.state.fl.us/osi/green-school-designation)



# Designation Tiers

The Program is a 4-level tiered designation. Schools have the opportunity to obtain different “Apple” levels based on the requirements of each tier.

- All schools start at the Green Apple level, then work their way to Bronze, Silver and eventually Gold Apple status by implementing additional best management practices.
- Each tier must be maintained for 12 consecutive months before applying to the next level.
- Designation is valid for three years from date of issuance.



# Green Apple Designation

- Complete and Submit Application for Admission
- Complete and Submit Environmental Self-Assessment and Planning Checklist
- Complete and Submit Request for On-Site Review





# Benefits & Technical Assistance

## Marketing

- Designated facilities are featured on the Florida *Green School Designation* website.
- Designees are granted exclusive use of the green marketing resources toolkit.

## Technical Assistance

- 24/7 web access to Best Management Practices, Technical Assistance and “green” resources
- DEP hosted webinars to continue employee education.

## Secondary Science Webinar

- March 21, 2017 at 4:00pm
- Topic: Authentic Art Instruction in Science
- Cell Cycle Lesson
- Jennifer Infinger, Arts Education Specialist
- <https://attendee.gotowebinar.com/register/2541985501473793026>

## Contact Information

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- Penny Taylor [Penny.Taylor@fldoe.org](mailto:Penny.Taylor@fldoe.org)
- Don Whitehead [Don.Whitehead@fldoe.org](mailto:Don.Whitehead@fldoe.org)
- Recorded webinars will be available on our website at  
<http://www.fldoe.org/academics/standards/subject-areas/math-science/science>
- Questions?