



# Fairchild Challenge for Elementary Schools

## 2010-2011 Annual Report



**FAIRCHILD TROPICAL BOTANIC GARDEN**  
Exploring, Explaining and Conserving the World of Tropical Plants



**The Fairchild Challenge fosters interest in the environment by encouraging students to:**

- APPRECIATE** the beauty and value of nature,
- DEVELOP** critical thinking skills,
- UNDERSTAND** the need for biodiversity and conservation,
- TAP** community resources,
- BECOME** actively engaged citizens and
- RECOGNIZE** that individuals do indeed make a difference.

### **Fairchild Challenge Introduction and History**

The Fairchild Challenge is a standards-based, multidisciplinary environmental education outreach program offered to all Pre-K-12 public, private, and independent schools in Miami-Dade County at no charge. Through its annual menu of diverse Challenges, the program engages students to explore the natural world, investigate local, national, and global environmental issues, and take action to address them. The program is designed to engage students and teachers in friendly competition throughout the school year, as they accumulate and attempt to accrue enough points to win the Fairchild Challenge Award.

The Fairchild Challenge was initiated in 2002 as a pilot program for high schools only. The following year, the program grew to include middle schools. By the 2007-2008 school year, the Fairchild Challenge Elementary School Pilot Program was launched, due in large part to the persistent appeals of elementary school teachers and administrators. With the launch of an undergraduate Fairchild Challenge in 2010-2011, the program truly serves as a continual pipeline for exposing students to the environment, starting in the Pre-K years and continuing through the college experience. The Fairchild Challenge is also proving to be a scaleable and replicable model, with more than 50 national and international sites trained to implement the Fairchild Challenge at their location, and thirteen of those launched to date.

After three successful years as a pilot program, the Fairchild Challenge for Elementary Schools was opened up to all Miami-Dade County Pre-K-5 schools during the 2010-2011 school year. On August 28, 2010, the Teacher's Information Brunch was held at Fairchild Tropical Botanic Garden, with nearly 200 elementary teachers in attendance. The school year concluded with the Teacher's Celebration Brunch on May 7, attended by approximately 90 participating teachers, and the Awards Ceremony on May 10, which had an impressive attendance of more than 350 students, parents, teachers, and school administrators.

## Participation

During its first year out of the pilot program stage, the Fairchild Challenge for Elementary Schools engaged 78 schools, with a total of 39,437 incidents of student and teacher participation. Of those 78 schools, 53 were public and 15 were private; 46 participating schools received Title One funding.

Fairchild is committed to making this outreach program accessible to all interested students and teachers in the region, regardless of their schools' resources. This year, the Fairchild Challenge for Elementary Schools encouraged participation with incentives such as mini-grants for school gardens, transportation subsidies, plant material, workshops, professional development and other additional support.

## Annual Menu of Challenges

This year's program consisted of four challenges for students in grades Pre-K through 5. Each challenge was grade-appropriate and aligned with Florida's Next Generation Sunshine State Standards. These challenges included:

### Challenge 1: Art – Leafy Layers

In this challenge, students were asked to create a piece of original art depicting plant leaves. Students were encouraged to explore the diversity of leaves, noticing the form, function and beauty of this plant part that is often overlooked. Using mixed media such as fabric, paint, pastels, crayons, and recycled materials, students were permitted to portray the leaves of up to three different species of plants. Additionally, students were asked to provide the common name and, for older students, the scientific names of each plant. Artwork was evaluated based on creativity, observation skills, botanical accuracy, artistry, and relevance to the theme.



*Olivian Aradanas, 3<sup>rd</sup> grade  
Southside Elementary Museums Magnet*

### Challenge 2: Writing – Leaves of Our Lives

For the writing challenge, students continued to explore the theme of leaves. Students were asked to choose a specific plant, take some time to focus on the leaves, and then write about a day in the life of the leaves of their chosen plant. Students were required to

include a description of the leaf shape, size and color, as well as one or more functions of leaves in our lives. Again, students were asked to provide the common name and, for older students, the scientific names of each plant. Entries were evaluated based on creativity, use of descriptive vocabulary, accuracy of scientific information, and relevance to the prompt.

*“Photosynthesis? I know what that is! I do it every day! I thought. That’s when I bask in the sun to soak it up, producing glucose, or sugar for my plant to eat”*

**-Eden Medina, 5<sup>th</sup> grade, Beth Emet Day School**

### **Challenge 3: Environmental Action**

Students were asked to take action to raise environmental awareness and promote conservation in their home, school and community. Their group efforts and outcomes were summarized in a booklet submitted to Fairchild; booklets were evaluated based on the depth and breadth of student involvement and how solution-oriented the projects were, among other criteria.

This year’s Environmental Action projects included:

- Establishing or expanding school wide recycling programs
- Participating in Baynanza and other community events
- Conducting water and/or energy audits at school and at home
- Re-using shopping bags and calculating amounts of plastic saved



### **Challenge 4: School Garden**

In this challenge, students were asked to establish, expand, or restore a theme garden at their school. Additionally, they were asked to provide examples of how the garden was used and interpreted as a learning tool across the curriculum. Their gardening efforts and outcomes were summarized in a booklet submitted to Fairchild. Again, projects were evaluated on the depth and breadth of student involvement, the quality of interpretation materials, as well as how the garden was used in the classroom.



***Coral Reef Montessori students share their garden during a school visit by Fairchild Challenge staff***

## **Professional Development and Partnerships**

Throughout the year, Fairchild's Education Department offers several additional opportunities for workshops and professional development, to support teachers and students in their Fairchild Challenge efforts. Additionally, Fairchild Challenge staff are available upon request to visit schools to discuss the program, offer consultation services, and provide additional resources.

The following is a sample of the workshops that Fairchild Challenge teachers and/or students participated in this year:

### **School Garden Workshop (For teachers)**

Due to high demand and interest, this workshop was offered twice this year. During this workshop, educators had the opportunity to learn about how to plan, design, implement, and manage a garden at their school. They participated in various hands-on activities both indoors and outdoors, including planting and composting demonstrations and several standards-based lesson plans across the curriculum. At the end of the day, teachers took home a CD with a wealth of resources, ideas, and activities to implement in the classroom.

### **Environmental Action Workshop (For teachers)**

During this workshop, teachers rotated through four stations, experiencing hands-on activities to learn about energy conservation, water conservation, biodiversity and environmental data collection. All activities were designed to support classroom activities, with an emphasis on cross-curricular connections. As with the other workshops, teachers were provided with a wealth of electronic resources, lesson plans and materials to use with their students.

### **Inspiration Day at the Abess Center (For teachers)**

The Inspiration Day workshop was held at the Abess Center for Environmental Studies (ACES) October 23, 2010 and was facilitated by Rowena Gerber, Director of the Environmental Studies Center at Miami Country Day School. During this event, teachers learned about solar cooking, container gardening and YouthCaN, an organization that promotes environmental responsibility through student-led conferences. Teachers helped "cook" their lunch in several solar ovens on-site and took home complimentary herbs for their school gardens.

### **Art Workshop (For students and teachers)**

On November 6, 2010, Fairchild Tropical Botanic Garden hosted 11 school groups and 17 art mentors to observe plants closely and use them as inspiration for Challenge 1: Art, Leafy Layers. Each school group was matched with at least one volunteer art mentor, all of whom were experienced professionals in some aspect of the visual arts. This partnership offered students a unique opportunity to receive professional advice and guidance in creating their own art piece for the Fairchild Challenge.

## **YouthCaN**

On February 17, 2011, 129 environmentally-minded elementary students gathered at Fairchild Tropical Botanic Garden for the YouthCaN Miami conference. YouthCaN is a national youth-run organization that unites environmentally active youth to exchange ideas about the environment and empower others to make a difference in their own communities. YouthCaN brought together 7 schools for a day of student presentations on various environmental topics ranging from *Eco-Friendly Stain Remover Detergent* to *Solar Cookers*. Each student received an herb to take home and schools were gifted with solar cookers and planter boxes donated by Miami Country Day School's Abess Center for Environmental Studies. At the end of this inspirational day, all students left with a greater understanding of their individual power to make a difference.



*YouthCaN Miami at Fairchild Tropical Botanic Garden on February 17, 2011*

## **Fairchild Challenge Entries and Awards**

All Fairchild Challenge entries are evaluated by a panel of independent judges, consisting of individuals with expertise or professionalism in that particular topic. Entries are judged based on rubrics created by Fairchild Challenge staff. Rubrics are designed to reflect the specific requirements outlined for each challenge in the booklet, as well as the listed evaluation criteria. During the 2010-2011 Fairchild Challenge, a total 35 individuals volunteered to be judges at one or more of the panels.

This year, all individual and special merit winners were recognized with a Fairchild Challenge medal and/or certificate. Group project winners received a trophy and certificate. In addition, more than 5,000 four-person gift passes (\$100 value each) to Fairchild Tropical Botanic Garden were given to participating students and teachers.

Schools that earned more than 500 points received the 2010-2011 Fairchild Challenge Award, and the top 16 scoring schools received up to \$1000 for their environmental programs (see list of awards below).

# Fairchild Challenge for Elementary Schools 2010-2011 Award Winners

## **FAIRCHILD CHALLENGE AWARDS**

By earning more than 500 points, 39 elementary schools  
received the Fairchild Challenge Award

Beth Emet Day School • Blue Lakes Elementary • Bob Graham Education Center  
Carrollton School of the Sacred Heart • Coconut Palm K-8 Academy • Coral Reef Montessori  
Cushman School • Devon Aire K-8 Center • Doral Academy • Dr. Carlos J. Finlay Elementary  
Dr. Henry W. Mack/West Little River Elementary • First United Methodist Christian School  
Frank C. Martin K-8 International Center • Gateway Environmental K-8 Learning Center  
Gordon School of Beth David Congregation • Howard Drive Elementary • Hubert O. Sibley Elementary  
Jacobson Sinai Academy • Jane S. Roberts K-8 Center • Key Biscayne Presbyterian Church School  
Mandarin Lakes K-8 Academy • Mater Academy of International Studies • North Hialeah Elementary  
Oak Grove Elementary • Palmetto Elementary • Pine Lake Elementary • Pinecrest Elementary  
Rockway Elementary • Ruth K. Broad Bay Harbor K-8 Center • Somerset Academy (Dade Campus)  
Somerset Academy Silver Palms • South Pointe Elementary • St. Kevin Catholic School  
St. Thomas Episcopal Parish School • Sunset Elementary • The Charter School at Waterstone  
W. J. Bryan Elementary • West Hialeah Gardens Elementary • Winston Park K-8 Center

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## **FAIRCHILD CHALLENGE HIGHEST HONORS**

Cash prizes for environmental initiatives were awarded to the  
top-scoring elementary schools

### **\$250 Winners**

Devon Aire K-8 Center • First United Methodist Christian School • Howard Drive Elementary  
Jane S. Roberts K-8 Center • Key Biscayne Presbyterian Church School • Oak Grove Elementary  
Pine Lake Elementary • Pinecrest Elementary • South Pointe Elementary  
St. Thomas Episcopal Parish School • Winston Park K-8 Center

### **\$500 Winners**

Bob Graham Education Center • Doral Academy • Hubert O. Sibley Elementary  
Palmetto Elementary • W. J. Bryan Elementary

### **\$1000 Winner**

Sunset Elementary

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### **THIRD PLACE OVERALL**

*Doral Academy*

### **SECOND PLACE OVERALL**

*Hubert O. Sibley Elementary*

### **FIRST PLACE OVERALL**

*Sunset Elementary*

## **Evaluation and Outcomes**

Students and teachers responded to this year's Fairchild Challenge with incredible enthusiasm, creativity and intellectual curiosity. Feedback and evaluation suggests that the Fairchild Challenge overwhelmingly affected teachers' enthusiasm for teaching, as well as students' ability to assess their own behavior and effect positive change in their homes, schools and communities.

## **Summary of Teacher Evaluation**

At the end of the school year, Fairchild hosted a Teacher Celebration Brunch for all participating teachers as a means to evaluate the successes and difficulties of the program. Teachers were given the opportunity to provide feedback through group discussion as well as a written survey. A total of 92 completed surveys were returned to Fairchild Challenge staff. The results of the Teacher Celebration Brunch discussion sessions and processed surveys are outlined below.

### **Strategies that teachers used to engage more teachers/students at their school:**

- Planning an "in house" workshop to discuss the Fairchild Challenge and potential lesson plans
- Sharing garden produce with other teachers to encourage them to participate
- Sharing emails with curriculum ideas and lessons per grade level
- Having the principal speak to teachers about the Fairchild Challenge and promoting school wide involvement

### **Difficulties encountered by school faculty and staff engaging in the Fairchild Challenge:**

- Limited planning time, difficult classes, and FCAT pressure
- Incorporating extra activities (especially for new/beginning teachers) was overwhelming
- Additional paperwork created resistance for involvement (documentation, lesson plans)

### **Teachers' suggestions to consider for the upcoming year included:**

- More workshops (including workshops for parents)
- Poetry, photography, technology, wearable art, performing arts and collaborative writing were all suggested as ideas for future challenges
- Moving the due date for Challenge 2: Writing after winter break to allow for more participation from kindergarten and first grade students
- Scheduling due dates and YouthCaN around FCAT schedules
- Fairchild Challenge staff should provide feedback on scores, especially on booklets (School Garden and Environmental Action)

### **Measuring Knowledge and Interest in the Environment**

<b>Survey Item</b>	<b>Strongly agree</b>	<b>Agree</b>	<b>Disagree or Strongly disagree</b>
Students' Knowledge about environment has increased	61%	37%	1%
Teachers' Knowledge about the environment has increased	58%	35%	2%
Students are more aware of environmental challenges/issues	63%	30%	2%
Students show more interest in the environment	67%	26%	1%
There has been an increase in students' environmentally friendly behavior	63%	33%	1%

### **Measuring Future Teacher Participation**

<b>Survey Item</b>	<b>Yes</b>	<b>No</b>
Teachers who intend to participate again in the Fairchild Challenge	91%	2%
Teachers recommend that others participate in the Fairchild Challenge	96%	1%

### **Summary and Vision**

Overall, teachers reported that the Fairchild Challenge is an opportunity to teach by example; a resource to offer students activities that relate to their life and to their own community issues; and a vehicle for empowering students to become engaged and make a difference. Teachers noted the value of the program to encourage team work both in the students and the faculty, instilling a passion for the outdoors, sciences and gardening.

Based on 2010-2011 attendance numbers, we can only imagine what participation levels in the Fairchild Challenge for Elementary Schools will grow to next year! During the 2011-2012 year, Fairchild Challenge staff will work to recruit and provide additional support to schools from under-resourced areas of Miami-Dade County. Based on this year's teacher surveys and feedback, program staff will also make some adjustments to improve the program, including offering YouthCaN on a Saturday to accommodate more attendance, restructuring the writing challenge to include kindergarten and first graders, and adding in a wearable fashion challenge in conjunction with the middle and high school programs' Fashion Show.

Because of the breadth, depth and reach of the Fairchild Challenge, we have the great potential to lead the way for environmental education in Miami-Dade County and beyond. It is with enthusiasm and inspiration that we look forward to the 2011-2012 Fairchild Challenge and continuing our mission to celebrate nature, cultivate minds and inspire action.

## **Teacher Feedback**

“Thank you for the joy you bring to South Florida, the education you bring to the children of our community, and the love you instill in each of us of our natural surroundings. We are truly grateful.” **-Linda Johnson, St. Thomas Episcopal Parish School**

“Thank you for the opportunity to be part of The Fairchild Challenge. I had all my students participate in writing about ‘Leaves of Our Life’. This gave my students the opportunity to realize the scientific knowledge about their leaf while tying in the elements of Creative Writing. We need to create these experiences for students so they can truly appreciate their environment within the curriculum. I will share or writings in the coming years to show students that writing for a purpose can be exciting and a learning experience they will cherish for a lifetime.” **-Sandra Model, Ph.D., Kenwood K-8 Center**

“If someone asked me about the Fairchild Challenge I would say...it has been the most refreshing and exciting project I have done in my teaching career. I enjoyed it but most importantly my students had a once in a lifetime experience.” **-Ana Leon, Jane S. Roberts K-8 Center**

“My funniest [Fairchild Challenge] moment this year was when my students insisted on dressing up like all the items that we recycle. I had walking garbage people going to each class in the school to show everyone what to recycle.” **-Janet Diaz, Royal Palm Elementary**

“The Fairchild Challenge allows teachers to collaborate to create meaningful learning activities for all students.” **-Alma Punal, Winston Park K-8 Center**

“The most memorable moment was the day the prek children discovered their first cucumber, their faces were worth a million dollars!” **-Marcia Cardona, Royal Palm Elementary**

“We would like to thank you for the opportunity of participating in the Fairchild Challenge. We are excited about participating next year! This is an experience that the students will never forget! Thank you!” **-Ms. Diaz, The Charter School at Waterstone**

“If someone asked me about the Fairchild Challenge I would say...the word ‘challenge’ is an understatement. The year was fun, challenging and memorable and we can’t wait for next year!” **-Natalie Perez, Shenandoah Elementary**

“Funniest moment: When students were chopping onions that they grew for our ‘Soup Day’ and had tears and smiles on their faces. (They asked to cut the onions too!) If someone asked me about the Fairchild Challenge it’s a great opportunity to see your students shine.” **-Susan Meyer, Whispering Pines Elementary**

## Samples of Student Artwork



Stella MacLaney, Pre-K,  
South Pointe Elementary  
Challenge1A: "Leafy Layers" Special Merit



Maximilian Swietelsky, 2<sup>nd</sup> grade,  
St. Thomas Episcopal Parish Church School  
Challenge1B: "Leafy Layers" Special Merit



Penelope Hernandez, 4<sup>th</sup> grade, Kensington  
Park Elementary  
Challenge 1C: "Leafy Layers", First Place

## Samples of Student Writing

"I felt worry in my pinnate veins."

**-Klara Davidson-Schmich, 2<sup>nd</sup> grade, Sunset Elementary, Challenge2A: "Leaves of Our Lives" Third Place**

"I would be a mango tree leaf because it would be fun to be tickled by insect legs and be kind of jeweled shape, plus be surrounded by nice fruit"

**-Natalia Gasson, 2<sup>nd</sup> grade, Rockway Elementary, Challenge 2A: "Leaves of Our Lives"**

"If I am a palm leaf in a tree I feel happy because the other palm leaves in a tree are my brothers (...)"

**-Christopher Wilches, 2<sup>nd</sup> grade, Treasure Island Elementary, Challenge2A: "Leaves of Our Lives"**

"The idea of photosynthesis is so amazing. Just lay in the sun, take in some water through my roots and off I go! Turning sunlight into glucose and oxygen!"

**-Keila Saiegh, 4<sup>th</sup> grade, Jacobson Sinai Academy, Challenge 2B: "Leaves of Our Lives" Second Place**

"I like my shape because when there is a breeze, I'm in for a wild ride!...Sorry, but I have to be like a tree and leave!"

**-Jacob Weinman, 5<sup>th</sup> grade, Beth Emet Day School, Challenge 2B: "Leaves of Our Lives" Special Merit: Humorous Approach to Science**

"You could find me stiffly and impeccably organized on each twig of my home"

**-Gabriel Hernandez, 5<sup>th</sup> grade, Bob Graham Education Center, Challenge 2B: "Leaves of Our Lives"**