

# SEEN

SouthEast Education Network

## Green Schools

How schools are going  
green to save money

An Interview with

## Alberto Carvalho

Superintendent of  
Miami-Dade schools

Innovative approaches to  
**STEM Curriculum**

Effective teaching and  
**Classroom Management**





## Alberto Carvalho, Superintendent of Miami-Dade County Public Schools

# Leading the way on green schools

Alberto M. Carvalho is Superintendent of Miami-Dade County Public Schools (M-DCPS), the nation's fourth largest school system, serving a diverse student body of over 350,000 students. M-DCPS has an annual budget of almost \$4.3 billion and has 53,000 employees.

A nationally recognized expert on education reform and finance, as well as an outspoken advocate for high quality education for all students, Mr. Carvalho became Superintendent in September 2008. Under Carvalho's leadership, Miami-Dade has just been awarded The Broad Prize for Urban Education, the nation's highest award for improved student performance and reducing achievement gaps among ethnic groups and between high- and low-income students.

A leader in innovation, Mr. Carvalho is spearheading the transformation of education, pushing for the migration from textbooks to digital content and is developing cutting edge educational environments to meet the demands of today's learners.

SEEN spoke with Mr. Carvalho about the Green Schools initiatives he has led in M-DCPS; he has provided an overview of the programs and their outcomes for schools, budgets and the impact on students.

**SEEN: How did you decide to get involved with green initiatives?**

**Carvalho:** "In 2009, my Office launched the Millennial Access Platform to Third Millennium Learning which included an Eco-Awareness Platform consisting of two main initiatives:

1. Implementation of a green education program; and
2. Projects and programs aimed at achieving a carbon neutral footprint for the District over time.

"The driving force behind imple-

**"... as the nation's fourth largest school district... we have a unique opportunity to positively impact both our community's environmental quality of life as well as our bottom line."**

mentation of these initiatives was the acknowledgement that as the nation's fourth largest school district delivering education to 350,000 students in over 40 million square feet of educational space and support facilities, we have a unique opportunity to positively impact both our community's environmental quality of life as well as our bottom line."

**SEEN: Had you been looking for a way to integrate green initiatives into the schools?**

**Carvalho:** "I knew that in order for these initiatives to succeed on a larger scale, personalizing it and incentivizing participation would be of paramount importance. The first large-scale 'green' program launched was the energy conservation rebate program which I announced at the 2009-2010 Opening of Schools Address; that gave it maximum exposure and elevated its importance among school site personnel. The primary goals of the initiative, still in place today, were: to reduce energy consumption by an average of 10 to 15 percent from year to year; to achieve significant cost efficiencies for the District annually and positively impact our carbon footprint; and to reward school sites that beat their energy target for their efficiency and stewardship by returning to them 75 percent of any 'over and above' savings.

"When I launched the initiative I knew that regular communication between our sustainability office and the schools on their progress throughout the year would be key to keeping the

program on track, as would enlisting the help of local 'green' organizations to further liaise with teachers and students on more regular basis; our boots on the ground so to speak."

**SEEN: How did you get connected with Dream in Green?**

**Carvalho:** "Dream in Green approached the District a few years back and offered their services as 'ambassadors of sustainable practices' to augment District efforts. Their involvement has both broadened over the last three years as well as been reshaped by closer interaction with the District's sustainability office."

**SEEN: Can you give our readers an overview of this program (Dream in Green's Green Schools Challenge) — how does it work? What does it entail?**

**Carvalho:** "As I previously noted, the program has evolved over time. The current model entails a close working relationship between District sustainability staff and Dream in Green (DIG). For the past three years, we have joined forces to launch the Green Schools Challenge at the beginning of each school year using a district venue and scheduling it on a teacher planning day to maximize professional development opportunities for instructional school site personnel. Master plan points are provided to participating teachers as an added incentive.

"During the annual event, DIG and District staff present success stories, including a conversation about the prior

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year's energy rebate recipients, and discuss the goals for the new school year. DIG conducts hands-on activities with the attendees focusing on strategies for reducing energy and water consumption and increasing recycling. DIG is also available throughout the year as is District personnel to liaise with the schools on specific items and to address questions on conservation and recycling. Each year's efforts are capped with a yearend event where teachers and student representatives are recognized for their efforts and the top energy savers are recognized. This event is generally followed by a District distribution of rebates to the 'energy target beaters,' many of them in the tens of thousands, and the issuance of the new energy targets for the ensuing year."

**SEEN: What was reaction on the ground — did you find immediate support from individual schools, principals, teachers?**

**Carvalho:** "The reaction on the ground has been fantastic and interest has grown each year as the rebate checks go out to schools and they see first-hand that my commitment to this program is not only real but sustained. School sites usually have one or more champions, but we find that the school site administration is equally invested in the program since the rebates can be used by them for discretionary educational purposes."

**SEEN: Tell me about the community support element of this initiative.**

**Carvalho:** "Our conservation programs have opened up new opportunities for collaboration with a number of different partners, including the local utility which has taken on a more direct and active role in conducting energy assessments with district staff and DIG at schools where consumption may still be elevated despite reduction efforts. Additionally, and increasingly, schools and students are becoming agents for change in the area of environmental conservation through eco-club activities and com-

munity service ranging from environmental restoration to demonstration solar projects and outdoor classroom ecosystems."

**SEEN: I understand there is a STEM curriculum element to this initiative — tell us more about that.**

**Carvalho:** "As part of the Green Schools Challenge specifically, primary and secondary participating schools receive a DIG Guidebook tailored to their level that includes a number of lesson plans for classroom implementation; these range from energy and climate change to waste reduction and recycling, to water conservation and green transportation. Each lesson plan provides students with opportunities for research, analysis and problem solving, with a closely aligned tie in to science, mathematics or both."

**SEEN: What is the most important outcome you've seen?**

**Carvalho:** "Other than the energy consumption reduction we were able to achieve since 2009-2010 through 2011-2012 of approximately 50 million KWH and conservation related cost savings of over \$10 million for that period, the program has greatly elevated the importance and immediate benefits of environmental consciousness and stewardship at the individual school level."

**SEEN: Other outcomes?**

**Carvalho:** "The success of this program has increased school site awareness and interest in all that has to do with 'green' best practices and sustainability and as new programs are piloted, such as the recycling of 'styro-foam' lunch trays, district sustainability staff has no trouble finding willing and enthusiastic participants. For each program the district implements, there is usually an incentive element to capture the audience's attention and sustained commitment, and I have found that formula to work best."

**SEEN: Anything that surprised you?**

**Carvalho:** "I have to say that our success thus far has been encouraging but has not surprised me; I knew from the get go that the schools' level of participation and commitment would be high and that's exactly what we've found to be true."



Great  
change  
begins with  
great  
ideas.

*The education I experienced at Peabody prepared me to understand and confront the challenges in the health care industry. I now have the skills and connections to deliver value to my organization and the patients I serve.*

Ashley Mace Krueger, B.S.  
human & organizational  
development (health and  
human services)

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