

THE EDUCATION FUND'S

2015-2016 ideas with

# IMPACT

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see page 54

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Garden-Cafeteria Connections &

**30** other  
inspiring

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for your  
**CLASSROOM**  
see page 5

**idea EXPO**  
The Teacher Conference  
Get *CREATIVE*  
with tech tools &  
hands-on projects  
see pages 26-28



# The Education Fund: Innovation in Action for Education

The Education Fund enlists the support of the private sector to improve Miami-Dade public schools and bring excellence to public education. Our work reaches all 20,000+ teachers in 430+ schools and makes a difference in the lives of thousands of students.

- ★ \$46 million raised for public schools
- ★ 31,617 students' eating habits improved through an edible garden laboratory initiative
- ★ 34% increase in college enrollement attained as part of a national demonstration project
- ★ \$7.9 million in free supplies for classrooms, benefitting 1+ million students
- ★ \$2.5 million granted to teachers to foster student achievement in 4,550 classrooms
- ★ 10,500+ computers to students and parents
- ★ \$1.1 million raised for schools' visual arts programs
- ★ 1,675 business professionals teach for a day



## Attention Teachers! Get FREE supplies!

The Education Fund's Ocean Bank Center for Educational Materials makes surplus inventory and supplies donated by businesses available free to teachers to use in their Miami-Dade County Public Schools' classrooms.

To receive a free pass to shop for free, visit [www.educationfund.org](http://www.educationfund.org), and click on the "For Educators" button.

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*For nearly 20 years, R. Kirk Landon championed our cause with gifts of time, talent, and treasure. He introduced us to another loyal donor, Assurant, which continues to champion innovation in education. We are honored to pay homage to such a visionary man with these "Best of the Best" projects.*

*In addition to our Section Sponsors, The Education Fund would also like to thank TD Bank and Ford Motor Company Fund for their significant sponsorship of the IMPACT II Program.*

*\* Special funding from Ford Motor Company Fund*

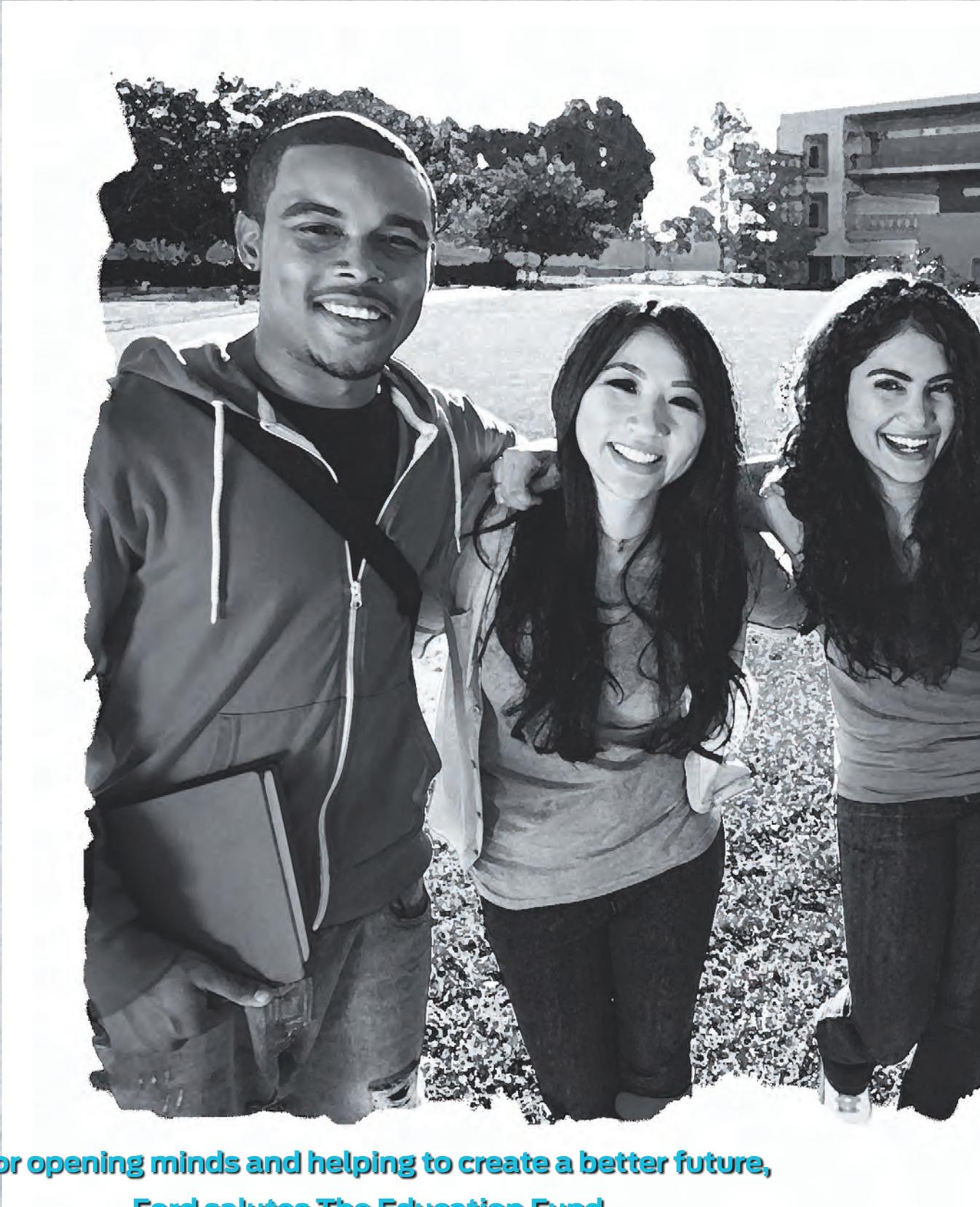
### The Education Fund's Ideas with IMPACT

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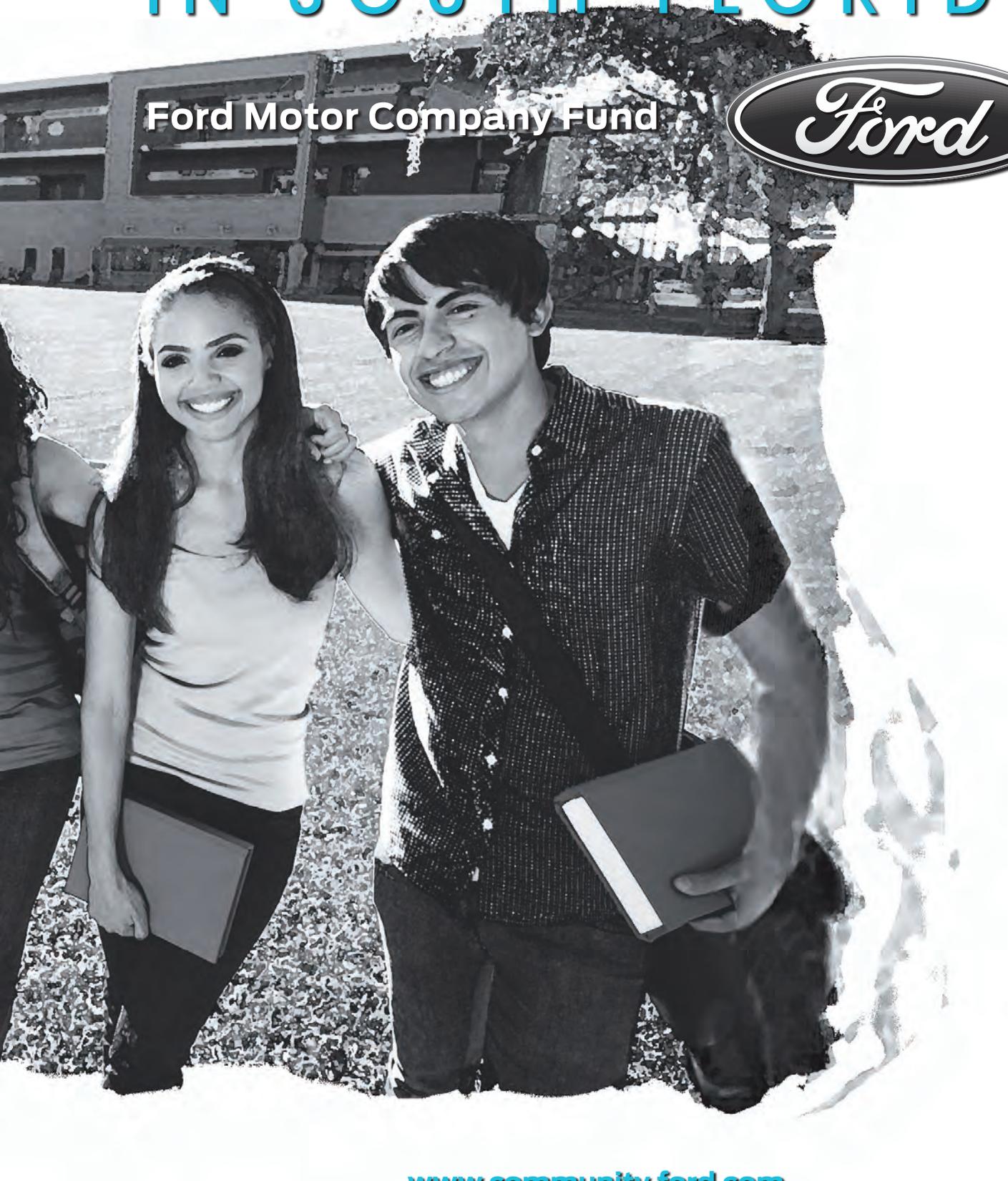
# driving



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# A Message from the Superintendent of Miami-Dade County Public Schools



For 30 years, The Education Fund has been a partner of Miami-Dade County Public Schools, sponsoring initiatives that support teachers with networking, training opportunities, grant funding, and more. By providing teachers the opportunity to be catalysts for innovation in the classroom through programs such as IMPACT II, The Education Fund gives teachers the resources to bring their ideas to life and an avenue to share proven ideas with others.

I have attended the IMPACT II Idea EXPO – The Teacher Conference for many years to support our teachers who value the exchange of ideas and seek to learn from each other. Having been a teacher, I understand the need to stay ahead of the curve. I applaud The Education Fund for including in this year’s catalog many projects that utilize technology in new ways to engage students in all subject areas.

IMPACT II is designed to pass on innovative, cost-effective teaching ideas in a user-friendly network that includes the Ideas with IMPACT catalog, curriculum “how-to” Idea Packets, Idea EXPO – The Teacher Conference, and Adapter Grants. I commend the dedicated educators who contribute their time and talents to the IMPACT II network. You make a difference for our students and our community.

Alberto M. Carvalho  
Superintendent of Schools



# The Education Fund's IMPACT II: A Network of Ideas

**IMPACT II** is a program of The Education Fund that focuses on strengthening curriculum, student achievement, and teacher leadership by identifying and connecting teachers who exemplify professionalism and creativity in their classrooms. This comprehensive network has specially designed programs to benefit teachers at all levels from beginning to veteran.

Teachers who have developed successful classroom teaching ideas are given **Disseminator Grants** to package and market their proven projects through the *Ideas with IMPACT* catalog, the **Idea EXPO - The Teacher Conference** and the **Idea Packets**, which contain curriculum materials such as lesson plans, worksheets and resource lists that help teachers adapt the ideas to their own classrooms. **Adapter Grants** provide supplies for the project ideas. Curriculum guides for each project and IMPACT II applications can be accessed at [educationfund.org](http://educationfund.org).



## HOW IMPACT II CAN WORK FOR YOU

- **ATTEND** the Idea EXPO - The Teacher Conference, Saturday, December 5th at the Miami Airport Convention Center (711 NW 72nd Avenue, Miami). **Workshops are listed on pages 24-26 of this catalog.**
  - Select from 80+ hands-on K-12 workshops
  - Free curriculum materials to cover Florida Standards
  - Receive special consideration when applying for an Adapter Grant
  - Earn 8 M-DCPS Master Plan Points!
- **APPLY** for an **Innovator Grant** to implement a new teaching idea that motivates and challenges students to learn. Applications are available now at [educationfund.org](http://educationfund.org). **Deadline is October 12th.**
- **APPLY** for an **Adapter Grant** to purchase materials to adapt one of the ideas featured in this catalog or in past years' catalogs. Contact the teacher who developed the idea to discuss your adaptation. Grant applications available now at [educationfund.org](http://educationfund.org). **Apply by Friday, December 11th.**
- **APPEAR** in next year's Ideas with IMPACT catalog. **Apply for a Disseminator Grant by April 1st.**

# Making money make sense

## for grades K-12.

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**Our free, one-of-a-kind education program helps students develop strong financial skills in school and online.**

Our trained instructors will visit your classroom to discuss banking basics, the importance of saving/budgeting and understanding credit. Or, you can download our lesson plans at [tdbank.com/wowzone](http://tdbank.com/wowzone), where:

- content is available in English and Spanish.
- kids, teens and parents can access other great sections including a virtual stock market and game room.

For more information or to schedule your classroom visit, connect to the TD Bank WOW!Zone at [tdbank.com/wowzone](http://tdbank.com/wowzone) or call 1-888-751-9000 for a TD Bank near you.

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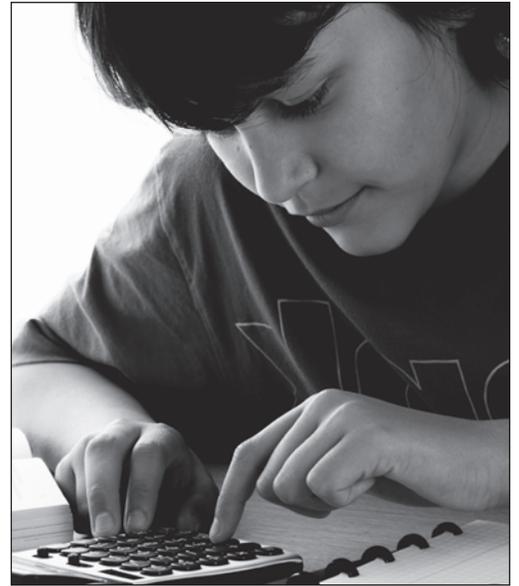
# TD Bank's WOW! Zone

*“The TD Bank WOW! Zone is a financial education program created and implemented to help children develop strong financial skills, in school and online.”*

The TD Bank WOW! Zone is a financial education program created and implemented to help children develop strong financial skills, in school and online. Trained bank instructors present teacher-written lesson plans in a fun and interactive way and have already taught financial education classes to over 10,000 students across South Florida. WOW! Zone lessons are available for grades K–12 and topics range from an introduction to money and saving, planning a budget, to understanding what credit is and how important it is to maintain good credit. The curriculum for each lesson meets the National Standards for K-12 Personal Finance.

WOW! Zone programs are flexible and can adjust to fit your class schedule. WOW! Zones can take place for one hour in one class or they can be spread out to include multiple lessons over a course of multiple days. WOW! Zones can also be coordinated to have multiple grade levels participating within the same day in an assembly style event or smaller multiple classes.

TD Bank also offers a chance for students to go behind the scenes and see how a bank operates with the TD Bank Junior Banker Store Tour. Designed for first through fifth grade, students get to step inside the vault, meet the tellers and learn how the ATM and Penny Arcade coin counter work. This is a great way to expose students to what banking is and what takes place every day in the financial industry.



## Students

The WOW! Zone program offers lessons for grades K-12.

## Materials & Resources

### TD Bank WOW! Zone Website

The TD Bank WOW! Zone website, [tdbank.com/wowzone](http://tdbank.com/wowzone), is an interactive learning tool for children, teens, parents and educators in English and Spanish. Children 12 and under can follow the online cartoon adventures and visit the game room. For teens, the website provides helpful tips, budget worksheets and a virtual stock market game to help them get started on a lifetime of smart money habits. Parents and educators can find free lesson plans and tips for discussing money with children.

### TD Bank Finance 101 Website

The TD Bank Finance 101 website provides 24/7 access to articles, tips and resources. Topics include budgeting basics, how to get out of debt and tips to building a great credit score. These resources can be found at [tdbank.com/financialeducation](http://tdbank.com/financialeducation).

### TD Bank Instructors

TD Bank has trained bank instructors available to visit classrooms to teach their financial education lessons. Visit the TD Bank WOW! Zone website mentioned above to find out how to have a certified Financial Education Instructor visit your classroom.

### Junior Banker Store Tour

Students go on an exciting adventure as they tour a local TD Bank store. Students get to step inside the vault, meet the tellers and learn how the ATM and Penny Arcade coin counter work.

## Standards

### Math Florida Standards

MAFS.K12.MP.1.1: Make sense of problems and persevere in solving them.

MAFS.K12.MP.2.1: Reason abstractly and quantitatively.

MAFS.K12.MP.3.1: Construct viable arguments and critique the reasoning of others.

### Next Generation Sunshine State Standards (Economics)

SS.3.E.1.3: Recognize that buyers and sellers interact to exchange goods and services through the use of trade or money.

SS.912.E.1.13: Explain the basic functions and characteristics of money, and describe the composition of the money supply in the United States.

SS.912.E.1.5: Compare different forms of business organizations.

## Sponsored by



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**To register for a WOW! Zone class or set up a Junior Banker Store Tour visit:**

[www.tdbank.com/wowzone](http://www.tdbank.com/wowzone)  
Students who complete the program receive a certificate for a new TD Simple Savings Account.

# Bank It! Dollars and Cents Adds Up

*“Teenage consumers see on paper the perils and rewards of everyday financial choices so they will have the skills to make good financial choices as adults.”*



To spend or not to spend? That is the question. Economics and financial literacy are difficult subjects for adults to understand and even more so for high school students. This project, *Bank It*, endeavors to bridge the gap for high school students to make wise financial choices.

One effective activity gives teens an opportunity to gain experience in managing money with a weekly allowance of \$20. Each week the class discusses newly released films. The students are then asked to choose between going to the movies with friends where they can spend their allowance, or to save their money for future purchases.

Another exercise asks students to select a career, conduct research about the career's annual salary, and create a mock household monthly budget that itemizes bills, and if money is available, to save for future use.

Through this project teenage consumers see on paper the perils and rewards of everyday financial choices so they will have the skills to make good financial choices as adults.

## Sponsored by

### Florida Matching Grants Program



### La-Shanda West

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Cutler Bay Senior High  
Mail Code: 60081  
305-235-1581 ext. 2292  
Principal: Lucas J. De La Torre

## Students

One hundred and twenty-five ninth and tenth grade students with varying math achievement levels, (ESOL, ESE, Gifted, Honors, Advance Placement, and Cambridge), participated in this project. For one month, students met two to three times a week to complete the activities. This project can be adapted for any age group or achievement level. In adapting this project, consider the financial backgrounds of the students and their financial goals.

## Staff

Since 2001, La-Shanda West has taught in Miami-Dade County Public Schools. Her honors include: Florida Council for the Social Studies Beginning Teacher of the Year (2002), Miami-Dade Council for the Social Studies Teacher of the Year (2005), Teacher Leader

Program Miami (2012) and IMPACT II Teacher Leadership (2015). She presented “Easy As ABC: Using Financial Literacy to Teach Social Studies” at the Miami-Dade Council for the Social Studies Annual Conference (2013) and iLearn Civics at the IMPACT II Idea EXPO (2013).

## Materials & Resources

Materials needed to implement this project are copy paper, paper money, chart paper, and black markers. A field trip to the Federal Reserve Bank of Atlanta, the Miami Branch, is an additional resource.

## Standards

### Math Florida Standards

MAFS.K12.MP.1.1: Make sense of problems & persevere in solving them.

MAFS.K12.MP.4.1: Model with mathematics.

### Next Generation Sunshine State Standards

SS.K.E.1.3: Recognize that people work to earn money to buy things they need or want.

SS.8.FL.3.7: Discuss the reasons that people save money.

SS.912.FL.2.2: Analyze situations in which when people consume goods & services, their consumption can have positive & negative effects on others.

SS.912.FL.3.1: Discuss the reasons why some people have a tendency to be impatient & choose immediate spending over saving for the future.

# Classroom Economy

*“Students learn responsibility and understand the importance of financial literacy.”*

In *Classroom Economy* teachers turn the class into a business in which each student has a job and learns the importance of financial literacy. Students begin by completing a classroom job application. Then the teacher “hires” each student and provides them with a salary and online bank account. The student “employees” are held accountable for their job requirements as well as all classroom responsibilities.

At the beginning of each month, students reconcile their accounts, pay rent, and decide whether to spend or save their money after all expenses are paid. Periodically, students are given the chance to spend their earned money at class stores, auctions, or on coupons. This system is entirely student run. All transactions are processed by student bankers, and students manage their own account ledger.

With this system, students see the benefit of working hard and that life can be rewarding because of it. They also begin to understand the importance of financial literacy. In the end, students become experts in accounting, budgeting and learn the consequences of saving versus spending.



## Students

Students in grades 3 through 5 completed this project. Although the jobs are geared toward students these grades, they can be adjusted for lower grade students.

## Staff

Wendy Gerry has taught grades K-4 for 10 years. The Education Fund has awarded her two Mini-Grants and one Disseminator Grant within the past four years. Ms. Gerry has been the recipient of the “New American Hero Award” from Charter Schools USA, a “Homestead Teacher of the Quarter” award from the City of Homestead, as well as teacher of the month from her home school. This project has been a part of her curriculum for seven years and has truly made a difference in student achievement.

## Materials & Resources

Teacher-made bank book and items for the school store are the materials needed. An additional resource would be to invite a local banker to come to the classroom to speak with students about how to open a bank account and the benefits of saving.

## Standards

### Math Florida Standards

MAFS.3.OA.1.1: Interpret products of whole numbers.

MAFS.3.OA.1.3: Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities.

MAFS.4.NBT.1.2: Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form.

MAFS.4.NBT.2.4: Fluently add and subtract multi-digit whole numbers using the standard algorithm.

MAFS.K12.MP.1.1: Make sense of problems and persevere in solving them.

MAFS.K12.MP.4.1: Model with mathematics.

## Sponsored by



### Wendy Gerry

wgerr@keyscharter.org  
Keys Gate Charter  
Mail Code: 3610  
305-230-1616  
Principal: Corinne Armstrong

The Humana Foundation supports The Education Fund and those who come together to make a positive difference in the lives of children in our community.



*“There is hope everywhere.”*  
— Anne Sexton

**Humana  
Foundation**

[HumanaFoundation.org](http://HumanaFoundation.org)

# Edible Garden Network

## A Collaborative Nutrition Initiative

*“Due to the program’s success, the Edible Garden Network has now expanded to 51 schools, benefitting more than 31,600 students annually.”*

In July of 2007 with support from the **Health Foundation of South Florida** and Miami-Dade County Public Schools, The Education Fund selected five Miami-Dade County public schools to pilot the Edible Garden Network, a Collaborative Nutrition Initiative (CNI).

The Education Fund designed CNI as a student-centered, seed-to-table project to teach elementary school students health and nutrition literacy. Science, math, language arts, and other subjects were taught through hands-on garden activities. Children were excited to get their hands dirty while learning about health and the environment.

Due to the program’s success, The Education Fund was encouraged to expand the Edible Garden Network. Now, 51 schools are participating, benefitting more than 31,600 students annually, with 90% of the students coming from homes where exposure to fresh produce is meager.

Starting in 2015, 25 schools served items from their gardens twice monthly during lunch time. The Education Fund, with support from the **Health Foundation of South Florida**, and M-DCPS Department of Food and Nutrition provided workshops for cafeteria managers and teachers on using fresh fruits and vegetables from the school gardens to enhance school lunches.

Also in 2015, **Citi Gardens® Grown With The Education Fund** was launched. With Citi’s support, The Education Fund is expanding gardens in all 51 schools and in 11 schools food forests are being built, each with 3,000 to 5,000 sq. ft. of edible landscaping. Not only are the Citi Gardens food forests used in everyday lessons, they give students access to fresh produce in school and enough to share the harvest around their tables at home.



### Results and Recognitions

CNI has exceeded all expectations. Results from yearly evaluations demonstrate a:

- 75% improvement in student science assessment scores;
- 53% increase in student willingness to eat healthy foods; and a
- 50% increase in student consumption of fruits and vegetables.
- 48% increase in parents serving healthier meals;

Because of its proven track record, CNI was awarded the prestigious Sapphire Award from The Blue Foundation for “demonstrating excellence in addressing health disparities within the community.” CNI was also rated the #1 Obesity Prevention Program by the University of South Florida’s College of Public Health.

# Edible Garden Network

## A Collaborative Nutrition Initiative



Special thanks to  
**IMPACT II Section Sponsor**

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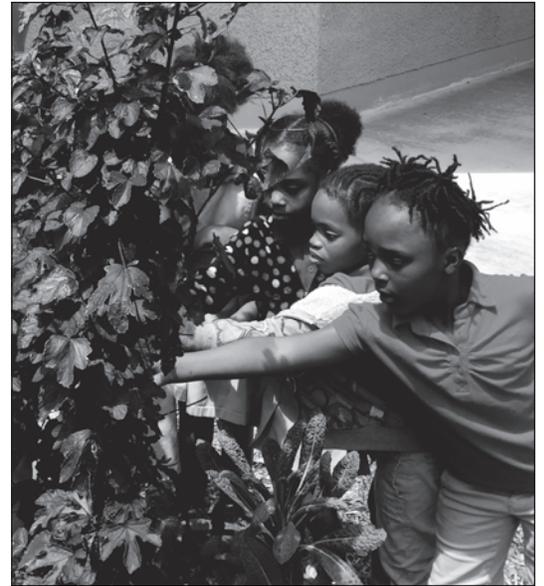
# Perennial Edible Plants for School Gardens

*“Fill your school garden with perennial fruits and vegetables. It will be productive year after year with little effort!”*

Most edible gardens are based on annuals such as lettuce, carrots, and beets. This project, *Perennial Edible Plants for School Gardens*, focuses on perennial fruits and vegetables that grow on trees and bushes for a more permanent and productive school garden. Plants such as katuk, chaya, moringa, and edible hibiscus can be incorporated into existing gardens with little effort.

Through scientific observation, students will be able to identify the growth parameters, history, and uses of various exotic plants. They will also be able to identify the differences between annuals and perennials as well as being able to identify the characteristics of both. Students will propagate, harvest, research, and experience eating the exotic plants.

This project will target critical thinking skills. Perennial edibles that grow with little input are not typically used in landscaping. Students are challenged to find new ways to use perennial edibles in public spaces to create beautiful, nutritious landscapes that improve health and well-being.



## Students

This project can involve one class or a team of teachers working together with several classes. It is designed for all elementary grade levels to be able to participate depending on available space for planting. It can also be adapted to any grade or academic level.

## Staff

Eduardo Recinos has been a teacher since 2002 and he has more than 20 years of experience with growing edible gardens. He was a lead teacher for The Education Fund's CNI program. He has been recognized as an Environmental Role Model by Fairchild Tropical Botanic Garden and received recognition from the Alliance for a Healthier Generation as a Healthy Schools coach and role model.

He is now the CNI Senior Program Manager for The Education Fund.

## Materials & Resources

The project requires at least 25 square feet of outdoor planting space that receives plenty of sunlight. The following items are essential to the project: a variety of perennial edibles, soil, mulch, shovels, pickaxe, lab notebooks for observations, rulers and magnifying glasses. Additionally, copies of the following publications provide valuable information: *Echo Technical Note -Vegetables for SW Florida in the Summer Months*; *Perennial Vegetables: From Artichokes to Zuiki Taro* by Eric Toensmeier; and *Plants for use in Permaculture in the Tropics* by Franklin W. Martin.

## Standards Next Generation Sunshine State Standards

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.

SS.3.G.3.1 Describe the climate and vegetation in the United States, Canada, Mexico, and the Caribbean.

SS.3.G.3.2 Describe the natural resources in the United States, Canada, Mexico, and the Caribbean.

## Supported by

# Humana Foundation

**Eduardo Recinos**  
CNI Senior Program Manager  
The Education Fund  
erecinos@educationfund.org  
305-558-4544, ext. 119

# Cafeteria-Garden Connections

*“Students who grow fruits and vegetables will eat more fruits and vegetables; especially when it is offered in the cafeteria as part of the school lunch program.”*



This project, *Cafeteria-Garden Connections*, makes it possible for students to incorporate produce from their school gardens directly into the school’s lunch menu. The Education Fund, with the help of Miami-Dade County Public Schools Department of Food and Nutrition and support from the **Health Foundation of South Florida**, has created an easy system for schools to use the fresh produce from their gardens.

Teachers collaborate and plan with cafeteria managers so that students can harvest from the school garden and deliver it to the cafeteria. Students will be able to measure harvests for the cafeteria and learn how to integrate it into the existing menu. In the classroom they will learn fractions through recipes used by the cafeteria manager. They will also apply this to writing opinion pieces and expository writing about cooking, harvesting, and eating.

This project will challenge students to be creative with their resources while encouraging them to focus on healthy eating habits. They will increase their consumption of fresh fruits and vegetables while learning math and language arts skills.

## Supported by

# Humana Foundation

## Deborah LaBelle

CNI Program Manager  
The Education Fund  
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305-558-4544, ex.t 118

## Students

This project will work for any class size. It can be modified to accommodate all elementary grade levels. This project can also be modified to include all learning levels.

## Staff

Deborah LaBelle has been a chef since 1995. She has years of experience with growing edible gardens and harvesting herbs to sell at farmers markets. She was a teacher for the Miami Dade Community College adult cooking program. She has also worked as a chef instructor for elementary school students. She is now the Program Manager for The Education Fund’s CNI program.

## Materials & Resources

The project requires an edible school garden site. The following items are required: plants or seeds, soil, mulch, pruners, cambros/baskets/bins, lab notebooks for observations, rulers, kitchen scale, produce scale, measuring cups, plastic forks/spoons, and paper cups and plates.

## Standards

### Math Florida Standards

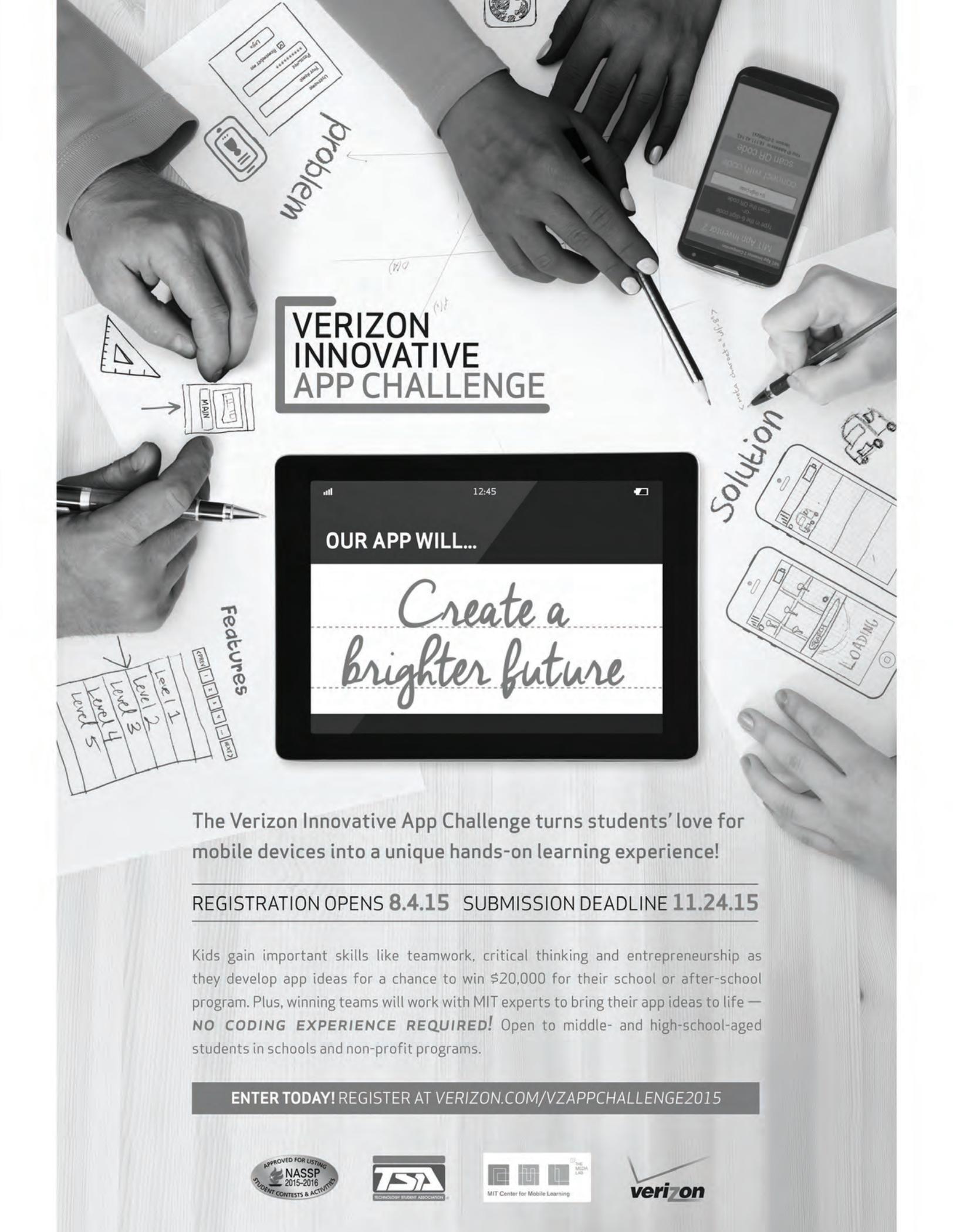
MAFS.3.MD.1.2 Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l). Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units.

MAFS.3.NF.1.1 Understand a fraction  $\frac{1}{b}$  as the quantity formed by 1 part when a whole is partitioned into  $b$  equal parts; understand a fraction  $\frac{a}{b}$  as the quantity formed by  $a$  parts of size  $\frac{1}{b}$ .

### Language Arts Florida Standards

LAFS.3.W.1.2 Write informative/explanatory texts to examine a topic and convey ideas and information clearly.

LAFS.3.W.1.1 Write opinion pieces on topics or texts, supporting a point of view with reasons.



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# Come CODE With Me!

“Elementary aged students explore and practice algorithmic thinking by playing games.”



In *Come CODE with Me* kindergarteners who struggled in school were able to shine by exploring and practicing algorithmic thinking by playing games. Incorporating CODE Learn into my lesson plans boosted students’ self-confidence as they problem-solve.

CODE Learn believes that every student should have the opportunity to learn computer science. It is their belief that critical thinking, logic, persistence, and creativity helps students excel at problem-solving in all subject areas, no matter what their age.

These self-guided and self-paced tutorials have programming and instructions that enable elementary aged students to explore and practice algorithmic thinking. What is great about this project is that students can be taught at a comfortable pace whether in consecutive days as a sub-unit or one day a week, for 18 weeks. Each course builds conceptually on the previous one so that students are able to progress through new concepts. If a student becomes stumped, the teacher can provide several strategies/recipes — Puzzle Solving Recipe, Debugging Recipe, and Rethinking CS Strategies — to steer them in the right direction.

Kindergarteners enjoyed CODING with me.

## Sponsored by



## Students

Twenty-five kindergarteners participated in the CODE Learn Project, along with 10 students in the aftercare program. This project can be adapted for upper elementary, middle, and high school students. The program offers a course designed to broaden high school participation in computer science.

## Staff

Nancy Sale has been an educator for 29 years in the Miami-Dade County School System. She has received numerous grants from The Education Fund, League of Environmental Educators, Florida Ag in the Classroom, and the Dade Reading Council. She has also presented the last 15 years at the IMPACT II Idea EXPO; the last six years, she presented Butterfly Bonanza at

NSTA. In the summer of 2015, Ms. Sale attended the ISTE Conference in Philadelphia, PA, funded by the Bill and Melinda Gates Foundation. For two years, she has incorporated the CODE Learn project into her classroom.

## Materials & Resources

The Promethean Board for large group instructions to introduce each lesson, the manual from CODE Learn, desk top computers, laptops, iPads and other materials can be found online at [codelearn.org](http://codelearn.org).

## Standards Language Arts Florida Standards

LAFS.K.12.SL.1.1: Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others’ ideas and expressing their own clearly.

LAFS.K.12.SL.1.2: Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally.

## Math Florida Standards

MAFS.K.12.MP.1.1: Make sense of problems and persevere in solving them.

MAFS.K.12.MP.4.1: Model with mathematics.

MAFS.K.12.MP.5.1: Use appropriate tools strategically.

## Nancy Sale

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Principal: Dr. Isolyn T. Hillhouse

“Fifth graders explore the periodic table through their own bodies and the foods they eat.”

Ready to make science fun and not humdrum? Look no further! The hands-on *ELEMENTary* project is guaranteed to leave students not only with a positive attitude towards science, but also high achievement scores on Florida’s Science assessment.

After reading the article, “The Periodic Table: Elements with Style,” fifth grade students are paired to conduct online research of the elements found in their bodies. Then they show their artistic talents by tracing their bodies on chart paper and listing the elements found in their bodies. For home learning, students put on their investigator hats and examine the elements in the food they eat, according to the nutrition information found on food labels. Students can use cereal boxes, milk cartons, and other boxed food containers.

With this collaborative activity, students explore the periodic table through their own bodies and can “see” science, even in the food that they eat, making science more relatable and fun.



## Students

Sixty-seven fifth graders participated in this activity — 18 gifted, 9 with varying exceptionalities, 2 being Autistic. This project can be modified for a range of levels, but it is recommended that groups of 20 or less complete the activity at a time.

## Staff

Maria Aluma began teaching fifth grade in 2012 and started this project with her students. In 1997, Ms. Aluma was recognized as Teacher of the Year for her school and then Science Teacher of the Year in 2013. In her tenure, she has been awarded over 10 education grants, including two disseminator grants, four Education Fund mini-grants, and five Parent Teacher Association grants.

## Materials & Resources

One periodic table shower curtain (or other large periodic table), a class set of *The Periodic Table: Elements with Style* by Adrian Dingle, and one roll of chart paper are needed to complete this project. Students will also need access to the internet as well.

## Standards

### Language Arts Florida Standards

LAFS.5.RI.1.3: Explain the relationships or interactions between two or more ideas or concepts in a historical, scientific, or technical text based on specific information in the text.

## Next Generation Sunshine State Standards

SC.5.N.1.1: Define a problem, use appropriate reference materials to support scientific understanding, plan and carry out scientific investigations of various types.

SC.5.P.8.4: Explore the scientific theory of atoms (also called atomic theory) by recognizing that all matter is composed of parts that are too small to be seen without magnification.

## Sponsored by



### Maria Aluma

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Blue Lakes K-8  
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Principal: Aida M. Marrero

# Hats Off to You!

*“Students design and create their own unique hat based on what they have learned about circumference, diameter, and radius — the Circle.”*



The goal of *Hats Off to You!* is to understand Pi as a ratio and the meaning of circumference while solving problems in a real-world context involving Pi. Students design and create their own unique hat based on what they have learned about circumference, diameter and radius—the circle.

The project begins with viewing the video “Mystery of Circles.” Based on their observations from the video, students answer questions from a hands-on activity worksheet. In this exercise, the students examine the relationships between different parts of a circle. Lastly, students design and create their own unique hat. This project is an innovative way to teach the meaning of circumference while using technology in the classroom.

Teachers all want their students to be engaged while learning concepts, especially challenging ones. Students find this project appealing because they master difficult mathematical concepts with a real-world application. This lesson also motivates students to take an unconventional approach to understanding circles as they think of ways to design and construct their own unique hat.

## Sponsored by



## Students

Sixth grade gifted/advanced and regular math classes totaling 60 students participated in this project, over the course of three weeks.

## Staff

Ana Fullana has taught mathematics for 19 years. In her tenure, Ms. Fullana has been the recipient of the following awards: the Dade County Council of Mathematics, Middle School Teacher of the Year Award in 2004, Office Depot Teacher of the Year recognition award, The Education Fund Disseminator Grant 2014 and the 2014 Adapter Grant.

## Ana Fullana

fullana@dadeschools.net  
Lawton Chiles Middle School  
Mail Code: 6161  
305-816-9101  
Principal: Nelson Izquierdo

## Materials & Resources

The students will need a computer, Discovery program, Math Reference Sheet, accessories to build the hat, string, compass, glue, report questions, report cover and lots of creativity.

The resources are the video “Mystery of Circles” from Discovery, common board builder, math reference sheet, tape measure, string, materials to accessorize hat, construction paper, cardboard paper or material to create hat, media center or computer lab.

## Standards

### Math Florida Standards

MAFS.6.RP.1.1: Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities.

MAFS.6.RP.1.2: Understand the concept of a unit rate  $a/b$  associated with a ratio  $a:b$  with  $b \neq 0$ , and use rate language in the context of a ratio relationship.

MAFS.K12.MP.1.1: Make sense of problems and persevere in solving them.

MAFS.K12.MP.5.1: Use appropriate tools strategically.

MAFS.K12.MP.3.1: Construct viable arguments and critique the reasoning of others.

# Hot Crystals Cool Outcomes

*“By simulating different cooling environments, students are able to see for themselves why certain rocks have crystals and why others do not.”*

Are you ready to rock? This project, *Hot Crystals Cool Outcomes* provides students who are studying the geology of rock cycle and crystal formation an engaging opportunity for discovery through inquiry. Through the use of rock samples and salol crystals (phenyl salicylate), burgeoning geologists work in pairs to liquefy their crystals (using hot plate and metal spoon) and then cool them at different rates (ice bath vs. room temp). Students then analyze the impact of cooling rates on crystal formation. The variation in the crystals is determined by examination with a magnifier. This activity employs analysis, drawing, collaboration, and critical thinking.

This project is quite simple, yet very impactful. By simulating different cooling environments, students are able to see for themselves why certain rocks have crystals and why others do not. Classes reap multiple benefits from this project because they are able to unearth answers of basic geologic principles through their experimentation. It brings the natural processes involved in crystal formation into the classroom and the hands of students.



## Students

A total of 150 regular, advanced, and gifted seventh grade students participated in the project. Students met three times per week on a block schedule. This project could be adapted to other grade levels and achievement levels.

## Staff

As an eight year veteran teacher, Laurie Futterman has been the recipient of several Education Fund Innovator and Disseminator grants. In previous years, she has received grants from Verizon and FP&L. Ms. Futterman has used this project with her classes for three years.

## Materials & Resources

Rock samples of sedimentary, igneous and metamorphic rock can be bought online. Include those with small and large crystals. Salol crystals/phenyl salicylate can be bought on line at [sciencestuff.com](http://sciencestuff.com) for \$31.

Each pair of students will need one metal spoon, one timer and one magnifier. The group will need two hot plates and four aluminum pans with ice cubes.

## Standards

### Language Arts Florida Standards

LAFS.7.SL.1.1: Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 7 topics, texts, and issues.

### Next Generation Sunshine State Standards

SC.7.E.6.1: Describe the layers of the solid Earth, including the lithosphere, the hot convecting mantle, and the dense metallic liquid and solid cores.

SC.7.E.6.2: Identify the patterns within the rock cycle and relate them to surface events (weathering and erosion) and sub-surface events (plate tectonics and mountain building).

## Sponsored by



### Laurie Futterman

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David Lawrence Jr. K-8 Center  
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305-354-2600  
Principal: Bernard L. Osborn

# How Things Fly: Paper Airplanes

“Students fly different models of paper airplanes to test all the factors involved in aerodynamics.”



It's a bird! It's a plane – Actually it is a plane! Paper airplanes are the simplest aircraft to build and fly, and students can also learn the basics of aerodynamics in *How Things Fly: Paper Airplanes*. Understanding how things fly leads to learning about math, physics, and engineering concepts. The activity consists of building paper planes following instructions on different models, which serve to explain the effects of mass, air resistance, shape and weight.

The forces of flight are interconnected, and a change in one affects the others. Understanding the basics — gravity and air — is key. You must grapple with gravity no matter how or where you fly because gravity is everywhere. You can't ignore air, either. Air is “stuff” that you must fly through, and it produces two forces of flight: lift and drag. Studying the motion of air around an object allows us to measure the forces of lift, which allows an aircraft to overcome gravity, and drag, which is the resistance an aircraft “feels” as it moves through the air. Everything moving through the air (including airplanes, rockets, and birds) is affected by aerodynamics. Students try flying different models of paper planes to test all the factors involved in aerodynamic principles.

## Sponsored by



### Dr. Rossana Chiarella

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Principal: Maribel B. Dotres

## Students



This project was adapted for pre-K to sixth grade levels, which included ESOL and SPED students. Throughout the 20 minutes of small-group time, students worked on this project. This project promoted children's enthusiasm for science and space exploration as they were guided through specially adapted hands-on activities.

Older students working in groups can use Google Drive for cloud-based documents. PowerPoint, Prezis, videos, iMovies can be used to create product commercials.

## Staff



With 23 years of experience in the education field, Dr. Rossana Chiarella was selected as a Space Foundation Teacher Liaison Officer. She has earned a Lunar/Meteorite Sample Disk

certification training from NASA. Dr. Chiarella has been awarded the Educators as Heroes Award by the Dade Reading Council, The Special Recognition Teaching Award by MDCPS' office of Early Childhood Program, Featured Teacher of the Month by LEGO Foundation, Aerospace Education Excellence Awards by Civil Air Patrol, and Un Maestro Especial award by Univision 23.

## Materials & Resources



Materials needed include: Paper, plastic straws, scissors, tape, glue gun, a 9” styrofoam plate, a meat tray, a paper clip, measuring tapes, timer, and photocopies of airplane models. Resources include the school media center for relative books, *Aerospace Activity Booklet* from CAPAE, and internet access for research.

## Standards



### Math Florida Standards

MAFS.2.MD.1.1: Measure the length of an object to the nearest inch, foot, centimeter, or meter by selecting and using appropriate tools.

MAFS.2.MD.4.10: Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories.

### Next Generation Sunshine State Standards

SC.5.P.13.1: Identify familiar forces that cause objects to move, such as pushes or pulls, including gravity acting on falling objects.

SC.5.P.13.2: Investigate and describe that the greater the force applied to it, the greater the change in motion of a given object.

# LEGO: More to Math Than Meets the Eye

Originally an Innovator Grant sponsored by the P.L. Dodge Foundation

*“LEGO brick, as an instructional tool, makes theoretical, abstract, mathematical concepts tangible for students.”*

Today, five plus five still equals 10, but now teachers recognize they need to teach how to find this answer in multiple ways because students have varying learning styles. The *LEGO: MoreToMath* 1-2 is an innovative hands-on educational tool for first and second graders targeting mathematical problem solving. This classroom resource uses the LEGO brick as the tool that makes theoretical, abstract, mathematical concepts tangible for students. When coupled with the current math curriculum, the MoreToMath set successfully provides students with the visual/kinesthetic tools to reinforce and understand the latest Math Common Core State Standards (CCSS). This set allows students to discover multiple ways to find the right answer.

The objective of the 48 lessons (24 for first grade and 24 for second grade students) in the MoreToMath curriculum pack is to provide concrete but challenging problem solving activities for students using the LEGO brick as a hands-on manipulative. The mathematical practices utilized include modeling with mathematics and using appropriate tools strategically. This LEGO set empowers teachers with the strategies to teach students who learn in various ways.



## Students

Twenty second grade students participated in this project. Because of the age of the students, the instructor decided to complete this lesson in a whole group rather than having students work independently. Teachers can modify the project to be used as a math teacher led center with 4 to 6 students. It can also be adapted for kindergarten to third grade students since there are varying levels of complexities within these activities.

## Staff

Zeny Ulloa has been educating children in Miami-Dade County Public Schools for 10 years. She has taught first graders and second graders. Mrs. Ulloa has been awarded eight Adapter grants and three Innovator Grants from The Education

Fund. Last year, she published an article for the Florida Department of Education, Just for Teachers' Blog titled, "Behavior Management for the 21st Century Teacher."

## Materials & Resources

The LEGO MoretoMath 1-2 set comes in a sturdy plastic container with a label sheet for marking the plastic compartment sorting tray. Additional math ideas can be found at the media center. LEGO reading books can be used to write mathematical problem solving stories. Volunteers are always helpful to sort the many LEGO bricks into their appropriate places.

## Standards Math Florida Standards

MAFS.2.MD.1.1: Measure the length of an object to the nearest inch, foot, centimeter, or meter by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.

MAFS.2.MD.2.5: Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units.

MAFS.2.MD.4.10: Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories.

MAFS.K12.MP.1.1: Make sense of problems & persevere in solving them.

MAFS.K12.MP.5.1: Use appropriate tools strategically.

## Sponsored by



## Zeny Ulloa

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Principal: Martha Jaureguizar

# Student Response Systems That Work On All Devices

*“Using Student Response Systems boost classroom communication and discussion and provides every student the opportunity to confidently participate.”*



Would you like your students to use clickers to respond in class, but you don't have thousands of dollars for a class set? Use free apps to turn your students' electronic devices into free clickers, or student response systems. With this project, *Student Response Systems that Work on All Devices*, teachers learn what free apps are available on the internet. By incorporating clickers into their instructional practice, instructors will easily gain instant insight into how well the class grasps the lesson and an on-the-spot understanding of what should be covered or reviewed next.

The benefits of clickers are myriad. Using clickers boost classroom communication and discussion and provides every student the opportunity to confidently participate. Using clickers reduces lesson preparation and grading time and focuses on instructional time. Assessment becomes an easy, fun, and immediately effective part of learning. Difficulties are addressed right away which ensures that each learner achieves the lesson objectives. Teachers can intervene where needed, identify students who are ready for a new challenge, and collaborate with parents, administrators and fellow teachers.

## Sponsored by



## Students

One hundred seventh grade science students and 50 eighth grade honors science students participated in this activity. This project can be adapted to suit any subject and for any age group.

## Staff

Suzanne Banas is a National Board Certified teacher, with a Ph.D. in Science Curriculum/Educational Leadership. For 15 years, Dr. Banas has taught middle school science in Miami-Dade County Public Schools. Since 2003, she has been an adjunct professor at Miami Dade College for the Education department. Her recent publications include “Emerging Young Investigators”

(Harvard Press) and “The Florida Science Teacher” (Publishing Student Research Spring 2014). Her honors include the Presidential Innovation Award for Environmental Educators Honorable Mention/Finalist 2014 and the Microsoft U.S. Innovative Education Finalist 2011.

## Materials & Resources

Students' personal mobile devices and wireless internet are needed to execute this project.

## Standards

### Math Florida Standards

MAFS.K12.MP.5.1: Use appropriate tools strategically.

### Language Arts Florida Standards

LAFS.K12.SL.1.2: Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally.

LAFS.K12.SL.2.5: Make strategic use of digital media and visual displays of data to express information and enhance understanding of presentations.

LAFS.K12.W.3.9: Draw evidence from literary or informational texts to support analysis, reflection, and research.

## Dr. Suzanne Banas

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# NASCAR Pasta Challenge

“Students learn how physical science concepts of force and motion relate to stock car racing.”

On your mark. Get set. Go race your pasta cars! If you are looking to get students excited about physical science, then this project, *NASCAR Pasta Challenge*, will get your engine roaring. Through exploring the world of NASCAR, students learn how the concepts of force and motion relate to stock car racing. Students are first taught how to calculate components of speed, distance, time, velocity and acceleration. Then they conduct research on the history of the sport. Although NASCAR seems to be a sport only for guys, students will be surprised by the number of women involved in several aspects of professional car racing. Once their research has been completed, students watch video footage of past races and visit the NASCAR website to learn about the risks, safety concerns, types of tracks, and stock car design considerations.

In teams, students are required to design and build a model stock car with pasta, using Life Savers as wheels. They test their cars on ramps and evaluate their performance using stop watches. In the *NASCAR Pasta Challenge*, two schools compete. Prizes are awarded for the top fastest vehicles.

Students find this project appealing because the final product showcases not only the collective effort among teams, but also their individual talents and abilities.



## Students

Seventh, eighth, and ninth grade students in honors physical science classes participated in this project. Between the two schools involved in this activity, a total of 125 students ultimately created model cars. During a two week period students met at least every other day to design, construct, and test their model pasta cars. Students conducted research as home learning assignments and collaborated through Edmodo. This project can easily be adapted for elementary grades.

## Staff

Ana Lissette Casanova has been teaching for 13 years. Currently, she is a middle school science teacher for advanced/honors seventh and eighth grade physical science students.

Rosa Perez-Rubi, another 13 year veteran, teaches seventh grade physical science for gifted and advanced students as well as physical science for ninth graders.

Both Ms. Casanova and Ms. Perez-Rubi have been awarded Disseminator and Adapter grants from The Education Fund in previous years.

## Materials & Resources

The following materials needed to construct the model cars include various types of pasta, glue guns, liquid glue, tape, card stock, Life Savers candy for wheels, ramp, stop-watches, meter-sticks, graphing paper, calculators, poster boards, open space to set up ramp, prizes, and certificates.

Additional resources include Edmodo, presentation software, media center access, research

guide and resource sites, field trip to Homestead NASCAR track, and a NASCAR representative as a guest speaker.

## Standards Next Generation Sunshine State Standards

SC.912.P.12.1: Distinguish between scalar & vector quantities & assess which should be used to describe an event.

SC.912.P.12.2: Analyze the motion of an object in terms of its position, velocity, & acceleration (with respect to a frame of reference) as functions of time.

SC.6.P.13.1: Investigate & describe types of forces including contact forces and forces acting at a distance, such as electrical, magnetic, and gravitational.

SC.6.P.13.3: Investigate & describe that an unbalanced force acting on an object changes its speed, or direction of motion, or both.

## Sponsored by



Ford Motor Company Fund

## Ana Lissette Casanova

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## Rosa Perez-Rubi

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# idea EXPO

## The Teacher Conference

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### SESSION A

(When registering, select your top three workshop choices in Session A)

#### \_\_\_Animated Androids: A Robot Challenge (13-14), s, t, K-12

Disseminator: *Gwen Foote*  
This project uses LEGOS Mindstorm robot kits, sound and light sensors and wireless technology. Videos of students' creations are used to improve time, speed and function and to mentor their peers. The robots are tested in a challenge course competition. Alternative energy add-on sets can be used to generate, store and use power from solar, wind and water.

#### \_\_\_SmarthPath: Guide to College Clubs 9-12

Presenter: *TBA*  
Aimed to empower low-income and first generation students with effective strategies and services to bring down the barriers to higher education, the Guide to College Clubs provides a collection of lessons, tools and resources all faculty can utilize throughout the school year to inform and prepare all students for success in college and career.

#### \_\_\_ELEMENTary (15-16), s, la, 4-6

Disseminator: *Maria Alumna*  
Teach students a new way to learn the periodic table as they research and create a chart of their bodies that includes all the elements in the table that can be found in their body. Students also explore the elements found in the foods that they eat.

#### \_\_\_Enlarging Masterpieces

##### – 2 BLOCK SESSION A & B

(10-11) a, m, K-12  
Disseminator: *Michael Flaum*  
Learn to create and enlarge paintings, for murals, backdrops, wall decorations. Participants will create an enlargement at the workshop.

#### \_\_\_Grant Writing Workshop

Presenter: *Lucy Petrey, Board Member, The Education Fund*  
Practical advice on grant writing including Innovator Grants. Leave the workshop with an Adapter application almost complete!

#### \_\_\_Help! My Fairy Tale Has Been Fractured! (15-16), la, pre-K-5

Disseminator: *Lisa Braye*  
Using a familiar fairy tale as a starting point, students write their own fairy tale by changing the setting, point of view, characters, and/or plot. By learning to identify different elements of a story, and being able to compare and contrast different versions of a story, students start building a strong writing foundation. Students then share their "fractured" fairy tale with their peers through a puppet performance.

#### \_\_\_iPublish Powerful Pop-Ups and Brilliant Brochures (13-14), t, regular, ESE, gifted, VE, K-12

Disseminator: *Eugenio Gant*  
Use these fun, authentic hands-on tasks to reach the most reluctant learner. Students create pop-up books and travel brochures on Florida (or any topic you choose). Dynamic apps allow students to write, illustrate and animate a story and publish online.

#### \_\_\_Launch Party: Get Started UP!

(15-16), m, la, 6-12  
Disseminator: *Tandy Caraway*  
Students are challenged to use their critical thinking skills to develop a business idea and compete against their peers to get their idea funded. Students learn startup and other essential protocols for entrepreneurs through a series of mini-lessons that combine math and entrepreneurship. Then in a "Shark Tank"-style activity, students pitch their products and are evaluated by their peers.

#### \_\_\_Mathbotics: Learning Math

Through Robotics (15-16), m, s, 3-5  
Disseminator: *Marcelle Farley*  
Students work as a team to design, build, and program a robot to complete specific tasks, thus learning the importance of teamwork, following directions, and troubleshooting. Students utilize their math skills as they program the robot using angles, rotations, and negative integers. This project is a practical way for students to see how mathematics can be applied to real world situations.

#### \_\_\_NASCAR Pasta Challenge: The Science Behind NASCAR Racing

(15-16), s, m, la, 5-10  
Disseminator: *Ana Lissette Casanova and Rosa Rubi-Perez*  
Students learn about the physical science concepts of force and motion through stock car racing by designing, building and testing their model cars out of pasta.

#### \_\_\_Readers' Theater Makes Great Readers! (12-13) la, 1-5

Disseminator: *Mayra Perez*  
An easy, inexpensive, motivational way to develop "reading stars" by improving reading fluency, comprehension and vocabulary. Scripts in all content areas.

#### \_\_\_Student Response Systems That Work on All Devices

(15-16) cm, t, s, m, K-12  
Disseminator: *Dr. Suzanne Banas*  
A great classroom tool for teachers to easily gain instant insight into how well the class grasps a lesson, as well as an on-the-spot understanding of what should be covered or reviewed next. Formative assessment has never been easier.

#### \_\_\_Successful Studentpreneurs

(15-16) la, m, ss, 3-6  
Disseminator: *Sandy Castellon*  
Student are motivated to embark on a journey into the exciting world of business through this "common core" project that includes studying the business plan process, reading *Lemonade War*, and creating a product. In the process, students learn social studies and math principles, and are invited to participate in their very own mock "Shark Tank" competition to see if their product has what it takes to be the next big idea.

#### \_\_\_TD Bank WOW! Zone m, la, ss, K-12

TD Bank instructors present a free financial education program which includes fun, interactive teacher-written lessons, online resources and a virtual stock market game. TD Bank instructors are available to teach your class!

#### \_\_\_Teaching Trunks on the Holocaust

(11-12) ss, la, a, 1-12  
Disseminators: *Tom Glaser and Esther Sterental*  
Teaching Trunks from the Florida Holocaust Museum in St. Pete can be obtained free-of-charge with all the materials and lesson plans needed for your grade level. Several trunks are displayed with advice and tips on how to properly teach the Holocaust.

**Don't miss the 2015 Idea EXPO — The Teacher Conference!**

## \_\_\_Terrific Teaching Through

### **Technology** (13-14) la, t, k-5

Disseminator: *Nancy Sale*

Children are fascinated with storytelling. Adding technology motivates them even more! Using digital storytelling and iBooksAuthor, students collaborate to write about their edible garden infusing their book with iPad photos, embedded videos, live websites, music and sound effects!

## \_\_\_Thank You, Judge Judy

(15-16) la, civics 6-12

Disseminator: *Jen Karetnick*

Learn how to use the popular court television show, *Judge Judy*, as a tool for teaching students everything about writing a good personal essay — the immediateness of characterization, the necessity of plot/conflict, the importance of dialogue, how to use setting, and the absoluteness of truth.

## \_\_\_Winding Up Wind: Designing, Building and Testing Windmills

(00-01) s, 5-12

Disseminator: *Rick Lapworth*

This is a great introduction to simple machines and all the variables and concepts that apply to them (work input, work output, effort and resistance forces, efficiency power, etc.). Participants design, build and test windmills in front of electric fans. This project provides a lot of “pedagogical bang for the buck” and is adaptable to all age groups.

# SESSION B

(When registering, select your top three workshop choices in Session B)

## \_\_\_A Toolbox for Teaching and Learning

(14-15) i, ss, s, la, m, K-12

Disseminator: *Eugenio Gant*

This project provides educators with a veritable toolkit of helpful tools (tips, strategies, and hands on activities) that will reshape the way students think and approach education. Organizational skills are improved and students will participate in engaging activities to promote ownership of their own learning.

## \_\_\_Activate “Good Reader” K-2 Strategies

(14-15) la, K-2

Disseminator: *Linda Askari Blanchfield*

Learn how to transform second graders from novice readers into confident readers who are devouring chapter books and informational format with ease. This project provides teachers 10 activities that go hand-in-hand with their existing reading and writing programs to enhance Close Reading and develop focused, detailed written responses. As a result of this project, students read more and test scores rose monthly.

## \_\_\_Animals in the Classroom

(13-14) i, s, K-12

Disseminator: *Dr. Suzanne Banas*

Learn how to manage animals in the classroom to use as teaching tools which provide a unique connection to science and the natural world. See examples of engaging projects such as, the “Hamster-Powered Night Lite,” and get tips on free and discounted ways to care and feed animals.

## \_\_\_Bank It! (15-16) m, ss, 6-12

Disseminator: *La-Shanda West*

This project aims to provide students with the tools and knowledge to make wise financial choices. Students gain experience with managing money with a weekly allowance and learn the benefits of saving versus spending. Another activity asks students to research a career’s annual salary and create a monthly household budget.

## \_\_\_Bot Building (15-16) m, s, la, 3-5

Disseminator: *Marcia Cardona*

Students from different grades and academic levels work together to problem-solve and troubleshoot as they build their robots. With its combination of innovation, creative thinking, and electronics, robotics are a wonderful way to enhance students’ math, science, technology, and communication skills.

## \_\_\_Butterfly Bonanza

(99-00) s, la, pre-K-6

Disseminator: *Nancy Sale*

An easy-to-create butterfly garden provides hands-on opportunities to study science, horticulture, and language arts.

## \_\_\_Extreme Makeover with Geometric Shapes and Technology (14-15) m, 6-9

Disseminator: *Ana Fullana*

Explore the U.S. customary system in learning how to measure different angles. Sample lessons include the use of craft materials to construct an angle house. Students use a measurement handout to employ strategies to solve measurement problems.

## \_\_\_Grant Writing Workshop

Presenter: *Lucy Petrey, Board Member, The Education Fund*

Practical advice on grant writing including Innovator Grants. Leave the workshop with an Adapter application almost complete!

## \_\_\_I Have an App for That!

(12-13) i, s, m, t, 5-12

Disseminator: *Tandy Caraway*

Students research an issue and create an app using Google Appinventor, a drag and drop interface. Learn how to use the tutorials to create apps. Examples of projects are provided and extensions that market the apps for fundraisers for a favorite cause.

## \_\_\_Literature Exposition Day

(09-10) la, 9-12

Disseminator: *Michelle Singh*

Students interview family members about the literary voices that represent their own cultural backgrounds or ethnic groups and represent that author in costume at the school EXPO.

## \_\_\_The Mindful Classroom

(15-16) cm, K-12

Disseminators: *Wendy Chan and Silvia Cardenas*

Provide students with the tools to learn coping skills to minimize stress and build impulse control, compassion, attention and communication skills. Mindfulness can be the “missing link” between academic achievement and emotional growth.

## \_\_\_The Science of Poetry: Finding

Truth in Fiction (15-16) la, s, t, 6-12

Disseminator: *Julie Vivian*

This project combines literature analysis with real-world application to create an unusual representation of the world of science. The two-part process begins with students choosing poetry that matches a field of study that interests them. After a classroom poetry slam, students proceed to explicate each work through language, tone, and thematic relationship, ultimately creating visual images and artwork around the actual text. Once each text is thoroughly analyzed, students create Weebly site blogs to serve as online references relating each poem to their scientific field.

## \_\_\_“Sense”-sational Story Time Snacks

(05-06) la, m, s, pre-K-2

Disseminator: *Mayra Perez*

Integrating cooking activities with stories helps students make connections between literature, math and science concepts.

## \_\_\_TD Bank WOW! Zone m, la, ss, K-12

TD Bank instructors present a free financial education program which includes fun, interactive teacher-written lessons, online resources and a virtual stock market game. TD Bank instructors are available to teach your class!

## \_\_\_Teaching Trunks on the Holocaust

(11-12) ss, la, a, 1-12

Disseminators: *Tom Glaser and Esther Sterental*

Teaching Trunks from the Florida Holocaust Museum in St. Pete can be obtained free-of-charge with all the materials and lesson plans needed for your grade level. Several trunks are displayed with advice and tips on how to properly teach the Holocaust.

## \_\_\_Two Fronts, No Waiting!

(15-16) ss, 9-10

Disseminator: *Keith Astuto*

Participate in an interactive and competitive role-playing game designed to demonstrate the limitations faced by all sides of World War I. Assume the role of a military strategist by deciding how and where to mobilize troops and artillery as you attempt to achieve military objectives.

## \_\_\_Unmasking My Character

(15-16) la, 9-10

Disseminator: *Griselis Reyes*

Students understand character development in literature while reading and annotating examples of both direct and indirect characterization. Students are to look for clues that reveal a character’s personality traits and are asked to create masks that represent their character. They also write an essay in which they provide textual evidence to support their artistic choices.

## \_\_\_WOW – Watching Our Weather

(12-13) s, t, 5-9

Disseminator: *Gwen Foote*

In this student inquiry project of lab activities and simulations, students assemble a portable weather station to monitor data through real time and prepare weather forecasts. Using a Galaxy Tablet, students can download local apps to easily submit reports to the school website and local weather stations.

# SESSION C

(When registering, select your top three workshop choices in Session C)

## \_\_\_Ancient Egypt in Modern Miami

(14-15) i, ss, m, 1-5

Disseminator: *Katie Prelaz*

Examine how inventions from Ancient Egypt are a part of life today in modern Miami. Architecture, geography, politics, commerce, transportation, and culture are all explored with hands-on activities allowing students to create a collection of their own artifacts.

## \_\_\_Bookmaking Bonanza (11-12), la, 2-5

Disseminator: *Eugenio Gant*

Making their own books unleashes students’ imagination and motivates them to develop reading and writing skills. Paper grocery sacks or paper plates become flip-up books or many other fun styles.

## \_\_\_Building a Thriving Competitive Robotics Team (15-16) m, s, la, 9-12

Disseminator: *Tandy Caraway*

A step-by-step guide on how to build and maintain a thriving competitive robotics team, including team roles, fundraising ideas, team resources, and robot design tips. This project will help students develop problem solving, teamwork, and 21st century skills.

## \_\_\_Come CODE with Me!

(15-16) t, m, K-12

Disseminator: *Nancy Sale*

Boost students’ self-confidence as they problem-solve. This project contains self-guided and self-paced tutorials that have programming and instructions to enable students to explore and practice algorithmic thinking by playing games.

## \_\_\_Google Earth: Using it in the Classroom (13-14) i, K-12

Presenter: *Dr. Suzanne Banas*

Come and explore the many ways to use the FREE Google Earth (download) for any subject and grade level. Create a virtual fieldtrip, use NASA data sets to collect and measure aspects of our earth, and see your neighborhood in 3-D!

## \_\_\_Grant Writing Workshop

Presenter: *Lucy Petrey, Board Member, The Education Fund*

Practical advice on grant writing including Innovator Grants. Leave the workshop with an Adapter application almost complete!

## \_\_\_Haiku History (15-16) la, ss, 5-12

Presenter: *Michelle Singh*

Haiku History stimulates student interest in the past and current events that affect the world around them by exposing them to the reading and analysis of fiction and non-fiction, as well as the expressive writing of poetry on these significant social issues.

## \_\_\_Hats Off to You! (15-16) m, 2-6

Presenter: *Ana Fullana*

Students explore the world of Pi as a ratio and the relationships between different parts of a circle. In a hands-on activity, students create and design their own unique hat. This project is an innovative way to teach the meaning of circumference, as students will apply and solve problems in a real-world context involving Pi.

### How Things Fly: Paper Airplanes

(15-16) s, m, k-6

Presenter: *Rossana Chiarella*

This project teaches the fundamental principles of math, physics, and science by demonstrating their application in the world of aeronautics and aerospace. Paper airplanes are the simplest aircraft to build and fly, and students can also learn the basics of aerodynamics. Students will build paper planes following instructions for different models, thereby learning the effects of mass, air resistance, shape, and weight.

### Investigations and Persuasion with CER

(15-16) la, s, 4-8

Presenter: *Gwen Foote*

Using CER – claim, evidence and reasoning – students make a persuasive case for environmental conservation. Students connect language arts and science skills to create a public service announcement and discover the power of communication and persuasion through videos.

### iRead, iImagine, iBuild with LEGO StoryStarter

(13-14) la, t, K-3

Disseminator: *Mayra Perez*

Students write/dictate their renditions of fairy tales and use LEGO bricks to build structures that include the story elements of setting, plot and characters. Digital photos of LEGO structures are included in their own storybooks.

### Hot Crystals Cool Outcomes

(15-16) s, 5-9

Disseminator: *Laurie Futterman*

Are you ready to rock? Through the use of rock samples and salol crystals (phenyl salicylate), students liquefy crystals and analyze the impact of cooling rates on crystal formation. By examining the crystals, students employ analysis, drawing, collaboration and critical thinking.

### Keeping Your Students Engaged: 20 Terrific Time-on-Task Tricks

(93-94) cm, 2-5

Disseminator: *Linda Askari Blanchfield*

Student-centered techniques that require minimal teacher prep and can be used with most subjects and classrooms.

### National Board Certified Teachers Information Session

Presenter: *Kathy Pham*

Receive tips and advice on the process of certification from the NBCT of Miami group.

### Re-Ro: Repurposed Robots

(15-16) m, s, K-5

Disseminator: *Christian Galvez*

This project is a fun and innovative way to make simple robots out of everyday materials. By using re-purposed materials, students engage in conservation by not producing new waste. Students gather discarded objects at home in order to make a robot that works!

### Stop, Animate and Learn

(14-15) la, ss, s, K-12

Disseminators: *Wendy Gerry*

Students become stop-motion animation artists as they utilize videos to learn concepts in any content area. Students acquire skills to research a topic, develop a detailed story board and script, then use a webcam or iPad set up with a stop-motion program to film and narrate their video.

### TD Bank WOW! Zone

m, la, ss, K-12

TD Bank instructors present a free financial education program which includes fun, interactive teacher-written lessons, online resources and a virtual stock market game. TD Bank instructors are available to teach your class!

### Teaching Trunks on the Holocaust

(11-12) ss, la, a, 1-12

Disseminators: *Tom Glaser and*

*Esther Sterental*

Teaching Trunks from the Florida Holocaust Museum in St. Pete can be obtained free-of-charge with all the materials and lesson plans needed for your grade level. Several trunks are displayed with advice and tips on how to properly teach the Holocaust.

### Trash or Toys?

(15-16) m, ss, 2-5

Disseminator: *Alena Sheriff*

Students learn math, science, and social studies as they explore the resourcefulness of the people in Uganda. Toys are designed using 2-D shapes and labeling. Students also brainstorm about what 3-D objects they would be able to use to actually build the toy, taking into consideration right, acute, and obtuse angles in their designs.

### Classroom Economy

(15-16), m, 2-5

Disseminator: *Wendy Gerry*

In this project, the class becomes a business in which each student has a job and learns the importance of financial literacy. Students complete job applications and are “hired” by the teacher. Each “employee” is given a salary and an online bank account. At the start of each month, students reconcile their accounts and are given the option to spend or save their money after their expenses are paid. All transactions are processed by student bankers. Within this system, students begin to understand the importance of accounting, budgeting and saving versus spending.

### Creating a Fantasy World with Photography

(15-16) a, la, 6-12

Disseminator: *Arlete Romero*

Students create a unique world through photography using toys, creative lighting and other props. Through this project they become writers, art directors, and stage/costume designers. Students also use their phones, tablets, digital cameras and photo editing apps to help bring their creative stories to life.

### Dav Pilkey: You’ve Inspired a Writing Wave

(10-11) la, r, 2-4

Disseminator: *Mayra Perez*

Fans of this author emulate his adventure stories with their own original tales and adapted renditions.

### Grant Writing Workshop

Presenter: *Lucy Petrey, Board Member, The Education Fund*

Practical advice on grant writing including Innovator Grants. Leave the workshop with an Adapter application almost complete!

### Icky Ichthyology

(09-10) s, 6-8

Disseminator: *Gwen Foote*

Students use a salt-water aquarium as a marine lab for observation and inquiry. They create energy pyramids, study marine biomes and investigate conservation organizations.

### LEGO: MoretoMath Than Meets the Eye

(15-16) m, K-3

Disseminator: *Zeny Ulloa*

An innovative hands-on educational tool for first through third graders targeting mathematical problem solving. This classroom resource uses the LEGO brick as the tool that makes theoretical, abstract, mathematical concepts tangible for students. When coupled with the current math curriculum, the MoreToMath set successfully provides students with the visual/kinesthetic tools to reinforce and understand the latest Math Common Core State Standards (CCSS).

### Mission to Planet X

(15-16) s, 8-12

Disseminator: *Rosa Perez-Rubi*

Prepare future astronauts to undertake a Mission to Planet X. As students learn about space and NASA history and its missions, they are challenged to program a rover (using a programmable robot), to perform a task on a new uncharted planet.

### Perennial Edible Plants for School Gardens

(14-15) m, s, K-5

Disseminator: *Eduardo Recinos*

Learn how to create a more permanent and productive school garden by focusing on perennial fruits and vegetables. Through scientific observation, students will be able to identify the growth parameters, history, and uses of various exotic plants. Students will propagate, harvest, research and experience eating the exotic plants.

### Reading through Rhymes and Rhythms

(01-02) la, mu, fl, esol, pre-K-2

Disseminator: *Nancy Sale*

Karaoke is used to help children with visual, aural, and language development.

### Take Note! Using Paper Making as a Teaching Tool

(10-11) i, s, la, regular & ese, 1-12

Disseminator: *Jane McCraw*

A fun way to teach science, ecology, math and language arts. Successfully adapted by teachers of art, regular classroom, visually-impaired and profoundly handicapped. See how it can fit in your classroom!

### TD Bank WOW! Zone

m, la, ss, K-12

TD Bank instructors present a free financial education program which includes fun, interactive teacher-written lessons, online resources and a virtual stock market game. TD Bank instructors are available to teach your class!

### Teaching Trunks on the Holocaust

(11-12) ss, la, a, 1-12

Disseminators: *Tom Glaser and*

*Esther Sterental*

Teaching Trunks from the Florida Holocaust Museum in St. Pete can be obtained free-of-charge with all the materials and lesson plans needed for your grade level. Several trunks are displayed with advice and tips on how to properly teach the Holocaust.

### Transform Your STEM Classroom into a BYOD Technology Hub

(12-13) t, m, s, i, 5-12

Disseminator: *Tandy Caraway*

Learn how a teacher with one workstation can expand technology via mobile devices to engage all students and enhance STEM instruction. Free technologies covered are Edmodo, a Facebook for education; Coursesites, a learning management system including wikis, blogs, web conferencing; Polleverywhere.com, an assessment tool that can be embedded in PowerPoint and generates multiple choice, true/false or short answer responses via students’ smartphones.

### What Do You Stand For?

#### A Lesson on Character Education Inspired by the Holocaust

(14-15) la, ss, 9-12

Disseminator: *Michelle Singh*

Increase student awareness and knowledge of history by providing a guide exposing them to the terrible tragedies that occurred during the Holocaust. After reading *Night* by Elie Wiesel and viewing films related to the Holocaust, students will write their own children’s book in which the main characters exhibit valuable and positive qualities needed in society such as honesty, kindness, tolerance, patience, and respect.

## SESSION D

(When registering, select your top three workshop choices in Session D)

### 40 Years of Teaching Tidbits

(12-13), cm, i, K-6

Disseminator: *Linda Askari Blanchfield*

Time-tested strategies for students of all abilities in reading, writing, math, science and social studies. Tidbits include classroom courtesies, groupings, theme units and daily procedures.

### Bringing Historic Figures to Life

(15-16), la, ss K-8

Disseminator: *Gloria Plaza*

Students research famous figures featured in the *Who Was?* book series and bring them to life through videos, pictures, websites, or costumes at a culminating event. Students also have an opportunity to master language arts skills by writing a biography about a family member or a friend while following the structure of these books.

### Cafeteria-Garden Connections

(15-16) m, la, K-5

Presenter: *Deborah LaBelle*

This project incorporates produce from school gardens directly into the school’s lunch menu. Teachers collaborate and plan with cafeteria managers so that students can harvest from the school garden and deliver it to the cafeteria. Students learn fractions through recipes used by the cafeteria manager.

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# Bot Building

*“Students from different grades and academic levels work together to problem-solve and troubleshoot as they build their robots.”*



This project, *Bot Building*, is designed for students in third to fifth grades. All levels of students can participate. Students from different grade and academic levels are grouped together to create successful working groups. Each group is assigned a project and given guidelines.

Within their group they must decide on the different jobs and work together on the project. The group is given a rubric on which they will be “graded,” emphasizing teamwork, problem-solving and troubleshooting. One group was building a color sorter and after completion it was not functioning as they expected. They learned troubleshooters fix problems. After many hours of trial and error, they succeeded.

Once each group finishes their robot, they demonstrate how it works and they discuss the programming phase and the uses of the robot they built.

With its combination of innovation, creative thinking, and electronics, robotics are a wonderful way to encourage students in not only building teamwork, troubleshooting and problem-solving strategies, but it also helps enhance their math, science, technology, and communication skills.

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## Students

Twenty-one students from third to fifth grades, with varying academic levels, participated in the Robotics Club. Students met once a week for two hours after school however it can be adapted for use in the classroom. Each month, students conducted demonstrations in various classrooms, which impacted an additional 200 students school-wide. The project can be adapted to suit different grade levels and group sizes.

## Staff

For 14 years, Marcia Cardona has been a classroom teacher. She currently teaches Gifted Reading and Language Arts to students in grades 2 through 5 and is an active board member of the Dade Reading Council. Ms. Cardona has been the recipient of various Education Fund grants.

Parent volunteer and computer programmer, Curt Warren, assisted Ms. Cardona with the implementation of this project.

## Materials & Resources

LEGO® MINDSTORMS® Education EV3 kit, software, and lessons book, computers with internet access, project boards to create obstacle courses, foam mats, and a large space to assemble an obstacle course for students to test their robots and programs are the materials needed to complete this project.

Helpful resources include LEGO educational websites and parent volunteers.

## Standards Language Arts Florida Standards

LAFS.3.SL.1.1: Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 3 topics and texts, building on others' ideas and expressing their own clearly.

LAFS.3.SL.1.3: Ask and answer questions about information from a speaker, offering appropriate elaboration and detail.

## Math Florida Standards

MAFS.K12.MP.1.1: Make sense of problems and persevere in solving them.

MAFS.K12.MP.2.1: Reason abstractly and quantitatively.

# Building a Thriving Competitive Robotics Team

*“Competing in robotics competitions challenges students to solve problems creatively and work together to achieve common goals.”*

**B**uilding a Thriving Competitive Robotics Team provides teachers with a blueprint for starting and sustaining a thriving, competitive, robotics team. Students learn how to build basic robots using robotic kits, such as those from FIRST Robotics Competition (FRC). These mini-scientists in training begin by sketching designs based on goals they have created for their team robot. The team votes on the best design and then begins to gather parts needed to assemble a mechanism for all to behold. The young engineers next build their robot from the FRC starter kit and practice maneuvering their new machine.

Once the team has mastered how to control their robots, then they play the FRC designated competitive game. There are over 50 awards available in FRC competitions. Teams determine which awards they are interested in participating in and then devise a plan as to how they will go about achieving these awards before competing in an actual tournament. Tournaments are held at the district and regional levels.

This project harnesses the power of the FRC robotics community to create and develop interest in STEM activities and careers. It challenges students to solve problems creatively and work together to achieve common goals.



## Students

The robotics team should primarily consist of 15 to 20 students from grades 9-12, with high aptitudes in STEM disciplines. During the competition season, the team met daily; in the off season, students met once or twice a week. This project can be adapted for high achieving students in grades 4 through 8.

## Staff

Tandy Caraway has been a classroom teacher for more than 14 years. Awards she has achieved during her teaching tenure include being selected as Teacher of the Year at her school site, a National Honorable Mention for the American Board for Certification of Teacher Excellence, the Spot Success Award, and the recipient of a Teach and Inspire Fellowship.

Ms. Caraway has garnered multiple grants: the Florida Learn & Serve pilot and renewal grants, the State Farm/University of Florida grant, the Sprint Character Education grant, and a Rookie FIRST grant.

## Materials & Resources

Materials include robot building workspace, hardware kits, robotic kits, tools, and computers with internet access. Additional resources needed to make this project a success are field trips to mentoring organizations from business, engineering, and programming communities, specialized robotic equipment, fundraising locations, and competition locations. This project requires at least two volunteer assistants/mentors due to overnight travel and the need for overnight chaperones.

## Standards

### Language Arts Florida Standards

LAFS.K12.L.3.6: Acquire and use accurately a range of general academic and domain-specific words

### Math Florida Standards

MAFS.K12.MP.1.1: Make sense of problems and persevere in solving them.

MAFS.K12.MP.3.1: Construct viable arguments and critique the reasoning of others.

MAFS.K12.MP.2.1: Reason abstractly and quantitatively.

### Next Generation Sunshine State Standards

SC.912.P.12.5: Apply the law of conservation of linear momentum to interactions, such as collisions between objects.

## Sponsored by



## Tandy Caraway

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# Mathbotics: Learning Math Through Robotics

“A practical way for students to see how what they learn in mathematics can be used in the real world.”



**M**athbotics involves students collaborating to design, build, and program a robot that is able to complete very specific missions. Students work together to research and prepare a report on a problem that needs a solution. To foster teamwork, students participated in team building activities. Students were given instructions to build a robotic arm using cardboard. As a team, they read the directions, gather the materials and build the robotic arm. This can be a very difficult activity for the students. However, through teamwork, they can learn the importance of collaborating, following directions, and measuring accurately.

Students are also shown videos on how to program and are given activities to help them code the robot to respond in various ways. They also program the robot using angles, rotations and negative integers. Through *Mathbotics* students see how what they learn in mathematics can be used in the real world and have a little fun in the process.

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## Students

Although the robotics team was initially comprised of 21 fifth graders, students in grades 3 to 5 can easily be a part of this activity. The team later expanded to include third and fourth grade students. The majority of the team had low performing students who scored a level 1 or 2 on the FCAT Reading and/or Math. Members met twice a week, before school, to participate in team building activities, conduct research, and program the robot.

Mathbotics, which uses LEGOS and robotics to teach teamwork, engineering, and math skills, can be adapted to suit primary grades by using MoretoMath LEGO kits. It can also be adapted to middle and high school by giving students more complex programming activities.

## Staff

Marcelle Farley, a National Board Certified Teacher, has been educating students for over 20 years. Previously, she has been the recipient of three Education Fund mini-grants.

## Materials & Resources

The materials needed are MINDSTORM EV3 Robotics kit; (the programming software will need to be downloaded to a computer), rulers, meter sticks, and a computer.

Optional materials needed are the following: rotation chart; Moretomath (kindergarten-second grade LEGO math kits); field mat and mission activities.

If the robotics team plans to compete, a second coach will be required. It is also helpful to enlist parent volunteers to help with student groups.

## Standards

### Language Arts Florida Standards

LAFS.3.SL.1.1: Engage effectively in a range of collaborative discussions.

### Math Florida Standards

MAFS.4.MD.1.2: Use the four operations to solve word problems involving distances, intervals of time, and money, including problems involving simple fractions or decimals

MAFS.3.MD.2.4: Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch.

MAFS.5.MD.1.1: Convert among different-sized standard measurement units within a given measurement system, and use these conversions in solving multi-step, real world problems.

## Marcelle Farley

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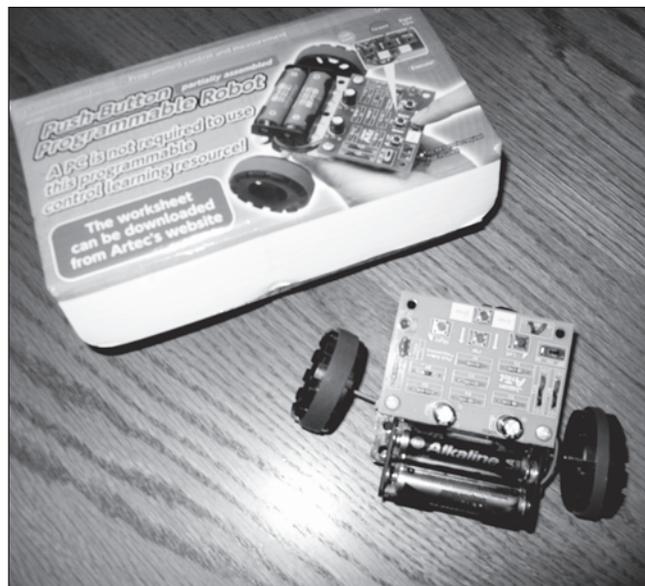
# Mission to Planet X

*“Students are challenged to program a rover to perform a task on a new uncharted planet.”*

Your mission, should you choose to accept it, involves preparing future astronauts to undertake a *Mission to Planet X*. As students learn about space and NASA history and its missions, they are challenged to program a rover, a programmable robot, to perform a task on a new uncharted planet.

After learning about the solar system and space, the students work collaboratively to create their own Planet X and explore it. First, each group creates an unknown planet in which they will identify its distance from the sun, size, atmosphere, and any other planetary characteristics. Next, students will program a rover to complete a mission on their planet. As a team, they decide what their robot's mission on this uncharted planet will be. Next, they will use a foam board to create an obstacle course which will represent the terrain of their planet. Last, they will test their rover's performance on the obstacle course.

Students will work collaboratively, use programming technology, enhance Earth/space skills, and understand the process of a mission to space.



## Students

Nearly 150 eighth graders participated in the Mission to Planet X project. Students were placed into teams of three or four. Classes met every other day.

## Staff

For the past seven years, Rosa Rubi-Perez has been a science teacher for grades sixth, seventh, and eighth. As an Earth/space and physical science instructor, she has taught a range of learners from advanced to students with learning difficulties. She has been recognized as elementary school site's Math Teacher of the Year, Science Teacher of the Year twice at her middle school, and Teacher of the Year. She has received Adapter Grants, Teacher Mini-Grants, and Disseminator Grants from The Education Fund.

## Materials & Resources

Materials include construction paper, scissors, glue, markers, pipe cleaners, foam boards, small paper bags, colored tissue paper and the programmable robots from Edmund Scientific (\$30.00 per robot).

Additional resources may include computers and a NASA class fieldtrip.

## Standards

### Language Arts Florida Standards

LAFS.K12.SL.2.5: Make strategic use of digital media and visual displays of data to express information and enhance understanding of presentations.

LAFS.K12.W.3.7: Conduct short as well as more sustained research projects based on focused questions, demonstrating understanding of the subject under investigation.

### Next Generation Sunshine State Standards

SC.8.E.5.3: Distinguish the hierarchical relationships between planets and other astronomical bodies relative to solar system.

SC.8.E.5.7: Compare and contrast the properties of objects in the Solar System.

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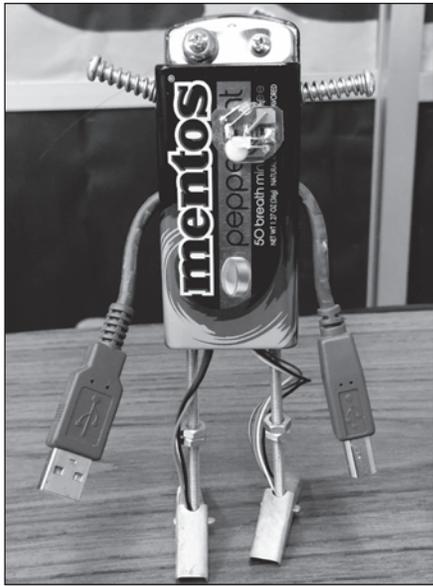


### Rosa Perez-Rubi

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Principal: Dr. Miguel Balsera

# Re-Ro: Repurposed Robotics

“Students gather discarded objects at home to make a robot in school.”



Children love robots. When you introduce a robot into any academic setting, learning becomes fun instantaneously. The *Re-Ro: Repurposed Robotics* project is a fun and innovative way to make simple robots out of everyday materials. By using re-purposed materials, students engage in conservation by not producing new waste.

Students gather discarded objects at home in order to make a robot in school. In the design phase, students work as a class or in small groups to come up with designs for your robot. Designs will be based upon materials gathered. In the engineering phase students begin assembling parts together. Older students can work more independently, with adult supervision. Younger students will benefit from a whole group project. Batteries and wire will be added to make the robot work.

In the evaluation phase, students check for craftsmanship, aesthetic value, and ease of use. As they test their robot's performance, any problems can be solved. During the presentation phase, students show off their robot. To add to the fun, they select or create a theme song and dance to present their robot. In the recording phase, students document the project's struggles and successes in their science journals. In the assessment phase, the teacher will assess journals, teamwork, and final product using a pre-determined rubric.

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## Students

The project has been implemented with 30 kindergarten students. Primary grade students, ages 5-7, often require close supervision. Upper grade levels can work more independently throughout every phase. Working in small groups allows each team to explore on their own, experimenting through trial and error. This can result in many innovations.

## Staff

For more than 12 years, Christian Galvez has worked as a Miami-Dade County Public Schools educator. He has taught science, math, and critical thinking to seventh grade students all the way down to kindergarten. Mr. Galvez was selected the Rookie Teacher of the Year for his school in 2004.

He is proud to turn STEM into STE(A)M by adding “A” for art.

## Materials & Resources

Material include journals, drawing and coloring supplies, used electronics and electronic toys still in working order, fresh batteries, electro-luminescent wire (EL Wire), two boxes of assorted machine screws and nuts, utility knife, drill and assorted bits, plastic containers, lightweight metal boxes, small metal spoons for arms (small robot), and empty canisters of Mentos and Altoids mints.

Resources include field trips to the Patricia and Phillip Frost Museum of Science and the Perez Art Museum Miami.

## Standards

### Math Florida Standards

MAFS.K12.MP.1.1: Make sense of problems and persevere in solving them.

MAFS.K12.MP.5.1: Use appropriate tools strategically.

### Next Generation Sunshine State Standards

SC.K.N.1.1: Collaborate with a partner to collect information.

SC.K.N.1.3: Keep records as appropriate — such as pictorial records — of investigations conducted.

SC.K.N.1.4: Observe and create a visual representation of an object which includes its major features.

## Christian Galvez

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Principal: Thelma Fornell

# Activate “Good Reader” K-2 Strategies

“Transform students from novice readers to confident readers who are devouring chapter books and informational format.”

Transform second graders from novice readers who can barely handle text of more than one page into confident readers who are devouring chapter books and informational format with ease.

The project *Activate “Good Reader” K-2 Strategies* takes a look at the Common Core focus on Close Reading. The teacher adds at a basic level pieces of skills required at the intermediate grades. The K-2 Common Core Standards looks at the 5Ws – where, when, who, why, and what. The Good Reader approach takes up the book chat level of text to text, text to self, and text to world. Roger Farr calls these techniques Think Alouds and showed how to raise reading scores.

Young children are prime candidates for being junior detectives who find what books or passages have in common. This project gives teachers 10 activities that go hand-in-hand with their existing reading and writing programs to enhance Close Reading and develop focused, detailed written responses.

As a result of this project students read more and test scores rose monthly.



## Students

Twenty-four second grade students, in a general education inclusion class with varying abilities and special needs, participated in this project. For over 40 years, Ms. Blanchfield has incorporated these “Good Reader” strategies to students in the first through the sixth grade, which is a clear indication of the adaptability of these activities.

## Staff

Linda Askari Blanchfield has been a classroom teacher since 1971. Ms. Blanchfield holds two Master’s degrees in Reading and Elementary Education. She is an executive board member and president of the Dade Reading Council and has been

the recipient of multiple grants and awards from The Education Fund since 1992. This published author of *Why Didn’t I Think of That* has spoken at the International Reading Association and the Florida Reading Association on various topics.

## Materials & Resources

No special materials are needed. All activities are described in the “Good Reader” Instructional Guide. Optional items are listed in the Resource section of the Instruction Booklet for this project. Resources include the school’s media center, the internet, guest speakers, and resource books to enhance students’ vocabularies and ignite conversations.

## Standards

### Language Arts Florida Standards

LAFS.K12.R.1.1: Read closely to determine what the text says.

LAFS.K12.R.1.2: Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.

LAFS.K12.R.1.3: Analyze how and why individuals, events, and ideas develop and interact over the course of a text.

LAFS.K12.W.1.3: Write narratives to develop real or imagined experiences or events using effective techniques.

LAFS.K12.W.2.4: Produce writing in which the development, organization, and style are appropriate to task, purpose, and audience.

## Sponsored by



### Linda Askari Blanchfield

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Royal Palm Elementary  
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Principal: Marta Garcia

# Bringing Historical Figures to Life

Originally an Innovator Grant sponsored by the P. L. Dodge Foundation

“Reading biographies of famous historic figures and creating dramas about them inspire elementary students to learn more about different time periods.”



The purpose of the project, *Bringing Historic Figures to Life*, is to provide students varied experiences with informational texts that meet the standards of state testing. Students engage in research on one of the famous figures featured in the *Who Was? Books: A Series of Nonfiction Books for Kids*. These illustrated biographies provide great information about fascinating figures in history while still providing entertainment through short chapters and a kid-friendly format.

Students bring historic figures to life when they research elements of the time period and present their findings through videos, pictures, websites, or costumes at a culminating event. Another activity of this project provides students an opportunity to master language arts skills by writing a biography about someone in their family or a friend while following the structure of these books.

The *Who Was?* series is a great tool to foster a student's passion for reading and curiosity for learning. This is a great project to implement during Women's History Month as these books provide a wealth of information about influential women in history, such as Anne Frank, Frida Kahlo, Helen Keller, Jane Goodall, and Queen Elizabeth I.

## Sponsored by



## Students

More than 100 third graders participated in this project. This project can be adapted for elementary or middle school. Students can complete this project either individually, as a class, or with the entire school.

## Staff

After 29 years in Miami-Dade County Public Schools, Gloria Plaza continues to find ways to motivate students to meet the highest standards. As a Media specialist, she generates all the funds for the library by applying for grants, fundraisers such as Book Fairs, and author visits, where a portion of the proceeds of autographed books sold, goes to the Media Center. In

her teaching career, Ms. Plaza has been a Reading Supervisor, Reading Specialist/ Coach, and an elementary and middle school instructor.

## Materials & Resources

*Who Was?* books are available in paperback with Scholastic points. Use bookmarks and bracelets for raffle giveaways. Library-bound collections with MARC records were purchased for the Media Center. Students and teachers created props and costumes.

## Standards Language Arts Florida Standards

LAFS.K.12.R.1.1: Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.

LAFS.K.12.R.1.3: Analyze how and why individuals, events, and ideas develop and interact over the course of a text.

LAFS.K.12.W.1.2: Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content.

## Gloria Plaza

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Principal: Silvia Tarafa

# Haiku History: Using Poetry to Revive History

*“High school freshmen create and perform haiku poems about social issues.”*

**H**aiku History taps into high school students’ skills in reading, writing, listening, and speaking while exposing them to important social issues that impacted history. Freshmen students make connections between history/social studies, reading, and language arts classes by participating in this project. All three courses work together to provide students with a stimulating, engaging, and rich experience.

In social studies/history students read, view, and discuss historical documents, documentaries, and events of significant importance such as slavery, the Holocaust, civil rights, and women’s rights. In reading students learn strategies to assist them in comprehension and analysis. In language arts students read literature related to historic events such as excerpts from slave narratives, speeches during the civil rights movement, and poems about the Holocaust. Students then choose a social issue or historic event that they feel strongly about and conduct additional research. Students complete a Writing Plan where they write about images, sensory details, facts, and symbols associated with their topics. This becomes the sketchpad haiku poem based on a social issue. After poems are completed, students participate in an Open Mic Day, similar to a Poetry Slam, where they perform their poems to an audience.



## Students

One hundred ninth grade students participated in this project. Sixty percent of these students were below proficiency in reading and mathematics. This project can be adapted to suit students in elementary and middle school grades and achievement levels. Younger students can also participate in fieldtrips, workshops with guest speakers, and Open Mic day.

## Staff

Michelle Singh is a National Board Certified English/ Language Arts instructor for ESOL and has taught since 2005. During her first year of teaching, she was honored as the Rookie Teacher of the Year for her school site. In 2013, she was nominated as the Teacher of the Year for her school.

Ms. Singh has received grants from The Education Fund, Donorschoose.org, and Florida Learn and Serve. She has also presented many sessions at the IMPACT II Idea EXPO and most recently at the Leadership Workshop this year.

## Materials & Resources

Classroom materials include books and textbooks, online articles, computer, projector, speakers, and a SMARTBoard/ Promethean.

Setup: Media Center with computer access for all students, projector, podium, screen, and pointer for presenter is needed for workshops and guest speaker presentations. Also, on Open Mic Day, auditorium access is needed along with microphones, large speakers, and decorations for stage.

## Standards

### Language Arts Florida Standards

LAFS.K12.SL.2.4: Present information, findings, and supporting evidence such that listeners can follow the line of reasoning and the organization, development, and style are appropriate to task, purpose, and audience.

LAFS.K12.SL.2.6: Adapt speech to a variety of contexts & communicative tasks.

LAFS.K12.W.3.7: Conduct short as well as more sustained research projects based on focused questions, demonstrating understanding of the subject under investigation.

LAFS.K12.W.3.9: Draw evidence from literary or informational texts to support analysis, reflection, & research.

## Sponsored by

### Florida Matching Grants Program



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# Help! My Fairy Tale Has Fractured!

Originally an Innovator Grant sponsored by the P. L. Dodge Foundation

“Second grade students put their own spin on traditional fairy tales by changing their perspective.”



How different would the tale of *Jack and the Beanstalk* be if it was told by the Giant or the story of *Cinderella* narrated by her two step-sisters? Second grade students in *Help! My Fairy Tale has Been Fractured!* put their own spin on traditional fairy tales by altering their perspective. After learning about point of view, students select a fairy tale to alter. Once tales are composed, students compare and contrast their “fractured” story with at least one other version. Through this process students build a solid writing foundation. They create puppets and use them to present their tales to the class, which improves their communication skills.

This project is sure to excite students about reading and identifying their point of view as well as the point of view of characters in a story. Teachers looking for a fun and creative way to teach point of view as well as compare and contrast will enjoy this project.

## Sponsored by

### Florida Matching Grants Program



## Students

Eighteen second grade students participated in this project. This project could be adapted for students in pre-k through fifth grade and can be completed in either large or small groups.

## Staff

Lisa Braye has been teaching in Miami-Dade County Public Schools for 20 years working in first, second, fourth and fifth grades. She has been awarded three education grants through The Education Fund, including two mini-grants.

## Materials & Resources

This project requires a projector and a laptop. Also a smart board and access to a school's media center to check out books are great resources for students.

## Standards

### Language Arts Florida Standards

LAFS.2.RL.1.1: Ask and answer such questions as who, what, where, when, why, and how to demonstrate understanding of key details in a text.

LAFS.2.RL.1.2: Recount stories, including fables and folktales from diverse cultures, and determine their central message, lesson, or moral.

LAFS.2.RL.2.6: Acknowledge differences in the points of view of characters, including by speaking in a different voice for each character when reading dialogue aloud.

LAFS.2.RL.3.9: Compare and contrast two or more versions of the same story by different authors or from different cultures.

## Lisa Braye

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# Investigations & Persuasion with CER

“Middle school students use Claim-Evidence-Reason (CER) strategies to research environmental concerns.”

Middle school students use Claim-Evidence-Reason (CER) strategies to research environmental concerns in *Investigations & Persuasion with CER*. Then they create public service announcement videos to alert others to the issues. Students who can see that they can make an impact are excited about improving their community.

Using CER, students learn to communicate what they know, how they know it, and find evidence to support their claim. Students examine questions such as “How can I contribute to the conservation of energy, limited natural resources, or wildlife?” Next, students choose an area to research using interactive technology. Students collaborate on projects, write articles, and document their work using cameras and videos. Engaged students create public service announcement videos to educate others about their specific environmental concern. This project inspired and cultivated a digital generation of environmental activists and innovators to make environmental issues relevant to their lives.



## Students

Science students in grades 6-8 with varying achievement levels participated in the project. Science teachers collaborated with the language arts teachers. Students worked primarily in teams. This project can be integrated with any grade and level of students.

## Staff

Dr. Gwendolyn Foote has been teaching since 2000. She currently teaches 6th through 8th grade. Dr. Foote is the Science Department Chair at her middle school and the club sponsor of the Science STEM Club. In 2013, she was recognized as the SEME Teacher of the Year, and in 2011, as her school site's Teacher of the Year. Dr. Foote has been awarded grant funding from the following organizations:

The Education Fund, Planting Sciences, NASA, Toshiba, U.S. Army, U.S. Air Force, PTSA, and the NSTA.

## Materials & Resources

The materials needed for this project are a camera, video editing software and USB drives for storing multimedia. Additional resources to assist in completing this project include [epa.gov](http://epa.gov); [seaturtle.org](http://seaturtle.org); [savethemanatee.org](http://savethemanatee.org); [nationalgeographic.com](http://nationalgeographic.com); and presentations by environmental professionals with community partners.

## Standards

### Next Generation Sunshine State Standards

SC.8.N.1.6: Understand that scientific investigations involve the collection of relevant empirical evidence, the use of logical reasoning, and the application of imagination in devising hypotheses, predictions, explanations and models to make sense of the collected evidence.

SC.8.N.2.2: Discuss what characterizes science and its methods.

SC.7.L.17.2: Compare and contrast the relationships among organisms such as mutualism, predation, parasitism, competition, and commensalism.

## Sponsored by

### Miami Sportfishing Tournament/ Gary M. Pappas



## Dr. Gwendolyn Foote

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Principal: Rene Bellmas

# Thank You, Judge Judy

“Students write personal essays based on what they have learned from Judge Judy.”



Episodes of the popular court television show, *Judge Judy*, reveal everything students need to know about writing a good personal essay. Students watch one episode, analyze it, and discover the necessary parts of a good show are the immediateness of characterization, the necessity of plot/conflict, the importance of dialogue, the use of setting, and the absoluteness of truth. Teachers can demonstrate how closely related is the progression of a televised court case with an essay.

Judge Judy episodes are extremely versatile and most importantly entertaining. The students get the idea very quickly from the way Judge Judy criticizes plaintiffs, defendants, and witnesses who lack evidence or clarity. She prods her litigants for more information and details about setting, plot, and dialogue.

For the next step of the project, the class reconstructs a published personal essay as a courtroom case and acts out the parts. An additional group or personal exercise could include taking transcripts from public records of small claims courtrooms and turning them into non-fiction essays.

Finally, the students write their own essays using all the elements of characterization, setting, dialogue, plot/conflict, and dramatic progression that they have learned from real-life drama.

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## Students

Forty middle school and 40 high school students, who are all creative writing majors, participated in this project. The project can easily be adapted to sixth-twelfth grades in varying group sizes. The emphasis can be on both drama and essay writing.

## Staff

Jen Karetnick, the Creative Writing Director for her school, teaches poetry, fiction, creative non-fiction and playwriting to grades 6-12. She was a Montessori teacher for grades 4 through 6. As a teacher, Ms. Karetnick has won grants from Poetic Power/Creative Communications, Target Field Trips, State Farm's Youth Service Awards and O, Miami.

## Materials & Resources

The main materials are an episode of *Judge Judy*, and a published personal essay. Also needed are small claims courtroom transcripts and additional published personal essays. Resources could include guest speakers, who are either lawyers or judges, and a field trip to small claims court.

## Standards

### Language Arts Florida Standards

LAFS.K12.W.1.3: Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences.

LAFS.K12.W.2.5: Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.

LAFS.K12.W.3.8: Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism.

## Jen Karetnick

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Principal: Alfredo de la Rosa

# The Science of Poetry: Finding Truth in Fiction

Originally an Innovator Grant sponsored by the Brickell Literary Society

*“In a classroom Poetry Slam, students perform science-based poems then create online blogs.”*

The Science of Poetry is designed to combine literature analysis with real-world application by creating a visual text representation of a poem which is related to the world of science.

First students choose poetry that matches a scientific field of study of particular interest to them. They hold a Poetry Slam event to read their poems aloud. Next, students each explicate their poem through language, tone, and thematic relationship, ultimately creating visual images and artwork around the actual text.

Once each text is thoroughly analyzed, students create Weebly site blogs to serve as online references relating each poem to their scientific field. These sites are accessible through student-created QR codes placed on the actual poem. Poems are framed and displayed throughout the school and/or community so that anyone can scan the QR codes and be taken to the student website as a final project relating text to scientific relationships.

In this project students investigate scientific fields of study through poetry and art and share an online legacy through individual websites. Students are just one QR scan away from relating words and color to the world around them.



## Students

Approximately 130 twelfth grade students ranging from Honors to Advanced Placement participated in this project. This project could easily be adapted to language arts students as young as middle school. It required eight to 10 hours of instruction, mostly because every component was completed during class. Parts can easily be worked on at home however. This project would be successful with small groups or large classes.

## Staff

As a 13-year veteran of high school English, Julie Vivian has taught Advanced Placement English, and twelfth grade English for the majority of her career. Ms. Vivian is a National Board Certified Teacher completing her third teacher

mini-grant with The Education Fund, and has been awarded nearly \$60,000 in grants through The Education Fund, Samsung, and Sanford/Expo.

## Materials & Resources

Materials needed include student-chosen texts, supplies for poetry slam such as cheese and crackers, art paper, markers/colored pencils, computer and printer access for websites and QR codes, display frames, assignment sheets, grading rubrics, and step-by-step instructions for website and QR coding creation.

Ideal resources include a forum for the poetry slam and use of a computer lab so that students can access the internet to create their online blogsites and QR codes.

## Standards

### Language Arts Florida Standards

LAFS.1112.RL.1.1: Cite strong & thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.

LAFS.1112.RL.2.4: Determine the meaning of words & phrases as they are used in the text.

LAFS.1112.SL.1.1: Initiate and participate effectively in a range of collaborative discussions with diverse partners on grades 11–12 topics, texts, and issues, building on others' ideas & expressing their own clearly and persuasively.

LAFS.1112.W.3.7: Conduct short as well as more sustained research projects to answer a question.

## Sponsored by

**Raj Rawal and  
Anne Marie Miller**

### Julie Vivian

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# Unmasking My Character

*“Literature students decorate masks to interpret character and write an essay with textual evidence to support their artistic choices.”*



**U**nmasking My Character has proven to be a valuable way for students to showcase their understanding and love of literature. The best feature of this project is that it allows students to think outside the box and creatively give an interpretation of their favorite literary characters.

The purpose of this project is to help students understand character development in literature. While students read *Antigone*, students annotate examples of both direct and indirect characterization. Students are to look for clues like words, actions, or reactions of others that reveal a character’s personality traits. After reading, students then study symbolism and color connotation. They choose their favorite character in the play.

Then students are given blank masks and art supplies. Students decorate the masks to give an interpretation of their character and also write an essay in which they provide textual evidence to support their artistic choices. At the project’s culmination, essays and masks are presented to the entire class so students can showcase their creativity and insightful character analysis.

## Sponsored by

### Florida Matching Grants Program



## Students

Tenth graders who participated were in classes ranging from regular to Honors and Gifted. After the class read *Antigone*, the mask project required one week to complete. This project can be adapted to any work of literature. It can also be easily modified for students in grades 6-10.

## Staff

Griselis Reyes has taught tenth grade English for 10 years. For the last five years she implemented this project in her classes. Ms. Reyes was awarded Rookie Teacher of the Year for her school site in 2005. She has worked as the tenth grade English Instructional Focus Committee Leader for the past six years at her school.

## Materials & Resources

Primary materials needed are blank paper masks (one per student), markers, crayons or paint. Additional materials include feathers, beads/jewels, and construction paper.

## Standards

### Language Arts Florida Standards

LAFS.910.RL.1.3: Analyze how complex characters (e.g., those with multiple or conflicting motivations) develop over the course of a text, interact with other characters, and advance the plot or develop the theme.

LAFS.910.RI.1.1: Cite strong & thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.

LAFS.910.W.1.2: Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, & analysis of content.

## Griselis Reyes

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# Trash or Toys?

*“Third graders use their critical thinking skills and make good use of the resources around them to convert everyday trash into toys.”*

Often children covet the newest toy which costs hundreds of dollars and offers little stimulation. The project, *Trash or Toys*, costs almost nothing, stimulates creativity, and promotes recycling. Students become more aware consumers.

At the onset of this project, third graders bring from home plastic bottles, bottle caps, empty rolls from paper towels, and other household items that later will be used to make their toy. Students learn about pollution and its connection with improper disposal of items.

Next, students view several short video segments about toys made out of trash. In Uganda, children make plastic bottle cars and banana leaf dolls. Students see the resourcefulness of Ugandan people. With the videos fresh in their minds, students design their toys on paper using two-dimensional shapes. These young innovators also brainstorm what three dimensional objects can be used to actually build their toy.

Students build their toys and explain what they made. They paint the toy and decorate it with buttons, bottle caps, and beads. When the toys are complete, the toys are exhibited in the media center. A video of the class demonstrating their toys can be posted on Schootube.



## Students

Twenty-two third grade students with a range of learning abilities participated in the project. This project can be adapted to grades 2-5.

## Staff

Alena Sheriff is certified as a kindergarten-third grade teacher and has worked as an educator for 20 years. Ms. Sheriff was her school site's Teacher of the Year and has achieved National Board Certification. She has received numerous grants that include the 2014-2015 Fairchild Challenge Garden Grant; 2014-2015 CNI Garden Grant; 2014-2015 Common Threads Grant; and 2015 The Education Fund Adapter Grant.

## Materials & Resources

Designate work stations for all the items and materials. Items needed include glue guns, glue sticks, X-ACTO cutting knife, regular glue, colored tapes, paints of various colors, paint-brushes, yarn, styrofoam (various shapes), spray paints in gold, silver, bronze, beads, scissors, pipe cleaners, storage bins, lollipop sticks, wheels, craft sticks and wood dowels.

The videos referenced in this project include “Make a toy car out of a plastic bottle with Dennis from Uganda,” ([youtube.com/watch?v=S66P0b0nAT8](https://www.youtube.com/watch?v=S66P0b0nAT8)) and “Make a Homemade Banana Leaf Doll” ([vimeo.com/78522041](https://www.vimeo.com/78522041)). Other useful websites include [kidsactivitiesblog.com/17867/homemade-toys](http://kidsactivitiesblog.com/17867/homemade-toys) and [sendacow.org/uganda](http://sendacow.org/uganda).

## Standards

### Language Arts Florida Standards

LAFS.K|2.SL.1.2: Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally.

### Math Florida Standards

MAFS.K|2.MP.5.1: Use appropriate tools strategically.

MAFS.3.G.1.1: Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals).

MAFS.3.G.1.2: Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole.

## Sponsored by



### Alena Sheriff

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# Two Fronts, No Waiting!

*“Transforming military strategy into a game makes it easier and more fun for students to understand the difficult decisions made by European powers during WWI.”*



For those who don't share an interest in history, the recounting of “things that happened years ago to a bunch of guys who are long dead” can be very dry. *Two Fronts, No Waiting* transforms military strategy into a game, making it easier and more fun. Students step into a distant time period to gain a deeper understanding of some difficult decisions. Students participating in this lesson were better able afterward to assess and critique the actions of the major European powers in World War I (WWI). The map-based materials reinforce geographic knowledge, economic theories of choice, resource allocation, and opportunity costs that will help prepare students for the challenges of future Social Studies courses.

Students assume the roles of military strategists in the early days of World War I, and decide how and where to mobilize their troops as they attempt to achieve their military objectives. Each game board of WWI has a map of Europe. Groups of 2-4 students represent sides of the war. As teams of students move and conduct battles, they realize the strategic and logistic difficulties the major warring nations faced on the Eastern and Western Fronts. Students experience the definition and true meaning of allocation of resources, opportunity costs, and choices as they decide how and where to deploy their forces.

## Sponsored by



**PEREZ TRADING COMPANY**

## Students

This lesson can be utilized with students in grades 9-12 taking World History, U.S. History, or Economics courses. Larger classes can be accommodated with multiple game boards, larger teams, rotating teams, or by running the lesson “fishbowl” style with one group playing out the game and the rest of the students watching. Using multiple boards is recommended to give students a chance to experience the lesson first-hand. By reducing the number of troops available to each side the game can be simplified for younger or lower-level students. Different learning styles are accommodated through group work, the interactive whiteboard presentations, and the use of manipulatives.

## Staff

National Board Certified teacher, Keith Astuto, has been teaching for 11 years and has received numerous awards from the Florida Council on Economic Education, the Federal Reserve Bank of Atlanta, the Atlanta Fed's Miami Branch, and the SIFMA Foundation for Investor Education. Mr. Astuto is a founding member of the Advisory Board for the Jack D. Gordon Institute for Public Policy and Citizenship Studies at Florida International University.

## Materials & Resources

The project can be conducted in a regular classroom using the game map, military resource tiles, planning maps for initial troop placement, turn order counters, PowerPoint slides for the lesson and for student orientation to the game's rules.

## Standards

### Next Generation Sunshine State Standards

SS.912.A.4.5: Examine causes, course, and consequences of United States involvement in World War I.

SS.912.G.1.4: Analyze geographic information from a variety of sources.

SS.912.W.7.1: Analyze the causes of World War I including the formation of European alliances and the roles of imperialism, nationalism, and militarism.

SS.912.E.1.4: Define supply, demand, quantity supplied, and quantity demanded; graphically illustrate situations that would cause changes in each.

## Keith Astuto

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# Holocaust Education

This collection of resources and IMPACT II projects on Holocaust Education is provided to ensure that the important lessons of the Holocaust are not forgotten and will be passed on from generation to generation. This vast array of projects by highly qualified teachers enhances the Holocaust curriculum for most grade and academic levels. Funding for all of the programs listed below is available through Adapter Grants.

## FUNDS AVAILABLE TO IMPLEMENT PROJECTS

- Download the Idea Packets (guides that include lesson plans, worksheets and resource lists) of the Holocaust projects online at [educationfund.org](http://educationfund.org).
- Contact the author/teacher of the project for advice on implementing the idea.
- Apply for an Adapter Grant (up to \$400) for any of the Holocaust projects listed below online at [educationfund.org](http://educationfund.org).



## PROJECTS TO ADAPT

### Banish Bullying Using Lessons from the Holocaust (Grades 6-8, social studies, language arts)

The key to breaking the bullying cycle may be to empower students by giving them the tools to empathize with the victims and identify with resisters. One such tool is to examine the antecedents of the Holocaust, a time when bullying was the norm in a society, and apply those lessons to today.

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305-931-1770

### I Never Saw Another Butterfly (Grades 5-12, social studies, visual arts, language arts)

In this project, students create their own mosaic inspired by the stories, poetry and artwork found in the book, *I Never Saw Another Butterfly*. The drawings and poems are by the children of Terezin, a Nazi concentration

camp outside of Prague, and are among the most poignant documents of the Holocaust.

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### A Powerful Choice: Bystander or Rescuer? (Grades 6-8, social studies)

The conscious decision made by people to be bystanders or rescuers impacted millions of lives during the Holocaust. Students examine portraits of courage, cowardice, and indifference and make a connection between the boldness of those who helped Jews escape from the Nazis and advocates from recent times and diverse cultures who have fought injustice.

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### “What Do You Stand For?” – A Lesson on Character Education Inspired by the Holocaust (Grades 9-12, language arts, social studies)

After reading books related to the terrible tragedies that occurred during the Holocaust such as *Night* by Elie Wiesel and viewing films related to the Holocaust, students will write their own children’s book in which the main characters exhibit valuable and positive qualities needed in society such as honesty, kindness, tolerance, patience, and respect.

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## RESOURCES

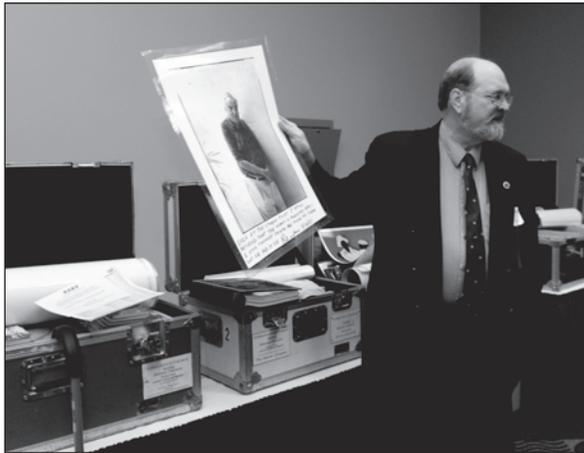
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Dr. Klein Kassenoff is a child survivor of the Holocaust having escaped Nazi Europe in 1941. “Dr. Miriam” provides information, lectures, and workshops on Holocaust Education. She co-authored with Dr. Anita Meinbach: *Memories of the Night: A Guide to the Holocaust* and *Studying the Holocaust Through Film and Literature*, which are both available as e-books on the internet.

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# Teaching Trunks on the Holocaust



The Florida Holocaust Museum provides literature-based teaching trunks to use to meet the Florida Mandate for Holocaust Education. Their dynamic trunk curriculum teaches the lessons of the Holocaust, genocide, and character education with trunks designed to accommodate the needs of one class or a team of teachers.

The trunk materials align with state standards and are appropriate for students at each level. The focus of each trunk is carefully developed to create a spiraling educational approach that builds upon the previous grade level trunk. The first and second grade trunk is a video-based series on respect and tolerance education. All other trunks contain picture books, class sets of literature, curriculum guides CDs, videos/DVDs, poster sets, and resource materials.

**The curricula focus on integration of subject areas, cooperative learning, multiple intelligences, and an emphasis on reading and writing skills. Themes include:**

- *Different and the Same* for first and second grade;
- *Creating Community* for third and fourth grade;
- *Beginning Holocaust Studies* for fifth grade;
- *Investigating Human Behavior* for middle school;
- *Historical Perspectives of the Holocaust* for high school.

**Further study is available through specialized trunks:**

- *Arts Trunk* for elementary students;
- *Human Rights and Genocide Trunk* for middle and senior high students.

## How to Reserve a Trunk Free of Charge

Contact the Florida Holocaust Museum in St. Petersburg directly to reserve a trunk to use in your school or classroom. They ship free of charge. For more information, go to [flholocaustmuseum.org/tours/trunk-info.aspx](http://flholocaustmuseum.org/tours/trunk-info.aspx).



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## Teaching Trunk Advisors

Contact the local teachers listed below for curriculum-related ideas, advice and support in using the trunks.

### Tom W. Glaser

[tomwglaser@dadeschools.net](mailto:tomwglaser@dadeschools.net)

Mr. Glaser teaches at Mater Academy Charter High School.

He attended the first U.S. Holocaust Memorial Museum Belfer Conference and was one of the first 25 Mandel Fellows. He is a member of the Florida Education Commissioner's Task Force on Holocaust Education and the Miami Beach Holocaust Memorial Education Committee.

### Esther Sterental

[esterental@dadeschools.net](mailto:esterental@dadeschools.net)

Ms. Sterental teaches at Miami Killian Senior High. She is a graduate of the Yad Vashem Holocaust Education Teacher Training Program in Jerusalem. In 2012, she was named the "Florida State Holocaust Education Teacher of the Year" and was one of a selected group of Florida professionals invited to attend the United States Holocaust Memorial Museum's Regional Education Summit.

# The Mindful Classroom

“This project gives students the tools to learn coping skills and minimize stress.”

Students are often experiencing increased levels of stress and pressure to perform at higher levels in the classroom than before. There is increased content requiring greater student effort and the curriculum is moving at a faster pace. *The Mindful Classroom* will give students the tools to learn coping skills to minimize stress.

Mindfulness can be the “missing link” between academic achievement and emotional growth. Studies of mindfulness have documented an increase in impulse control, compassion, attention, communication skills, and stress relief. Combined, these characteristics can create a healthy, happy, responsible, and more resilient individual.



## Students

Nineteen first grade students participated each day for 10 minutes. These techniques can be adapted to all grade levels K-12 and modified to suit larger groups.

## Staff

Wendy Chan has taught for 12 years. She holds a Masters in Montessori Early Childhood Education and she is certified in Yoga Education for K-8 and Tools for Teachers. Ms. Chan has completed an eight-week Mind-Based Stress Reduction Training and is currently enrolled in Mindful Schools Curriculum Training for pre-K through twelfth grades.

Silvia Cardenas has been a teacher for 15 years. She is a trained Life Coach. Ms. Cardenas has also completed an eight-

week Mind-Based Stress Reduction Training and is presently enrolled in Mindful Schools Curriculum Training for pre-K through twelfth grade.

## Materials & Resources

The materials needed for this project are bells, yoga mats and chimes.

Resources include the internet, Mindfulness-Based Stress Reduction (MBSR) training literature and Mindful Schools literature.

## Standards Next Generation Sunshine State Standards (Health Education)

HE.K.P.7.1: Identify healthy practices and behaviors to maintain or improve personal health.

HE.3.B.4.3: Demonstrate non-violent strategies to manage or resolve conflict.

HE.4.P.8.1: Assist others to make positive health choices.

HE.5.B.4.1: Illustrate techniques of effective verbal and nonverbal communication skills to enhance health.

HE.5.B.6.1: Specify a personal health goal and track progress toward achievement.

HE.6.B.5.2: Choose healthy alternatives over unhealthy alternatives when making a decision.

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Petrey**

### Wendy Chan

wachan@dadeschools.net  
David Lawrence Jr. K-8 Center  
Primary Learning Center  
South Campus  
305-892-7082

### Silvia Cardenas

scardenas@dadeschools.net  
David Lawrence Jr. K-8 Center  
Mail Code: 5005  
305-354-2600  
Principal: Bernard Osborn

# SmartPath: Guide to College Clubs

Major funding provided by Citi Foundation

“A collection of lessons, tools, and resources for student success.”



The Education Fund's *SmartPath to College* program aims to embed a “college going” culture in high schools, empowering low-income and first generation students with effective strategies and services to bring down the formidable barriers to higher education. SmartPath builds a collaborative network of nonprofit organizations, colleges and universities, vocational programs, the school district, businesses, and local leaders who are all committed to increasing availability of direct services and support that connect and commit the entire community to graduate and educate our young people.

College Clubs, a key component of SmartPath, connects ninth-twelfth grade students with trained teachers and counselors to address a variety of topics; how to research colleges, complete the FAFSA and negotiate the complex applications for college, financial-aid, and scholarships. Students not only learn the skills needed to apply for and succeed in college, but also to make college the goal.

The *Guide to College Clubs* was developed to assist schools in establishing college clubs for students in grades 9-12. The guide provides a collection of lessons, tools, and resources all faculty can utilize throughout the school year to inform and prepare all students for success in college and career. Lessons and topics covered include essay writing, test taking strategies, college research, and improving study skills.

## Sponsored by

### Florida Matching Grants Program



### Lisa Ciacci

SmartPath to College  
Program Director  
The Education Fund  
lciacci@educationfund.org  
305-558-4544, ext. 112

## Students

The Guide to College Clubs offers lessons for students in grades 9-12. Club participants include those who are the first in their family to attend college, those whose GPAs range between a C to a B, and those already seeking postsecondary options and support.

## Staff

Since 2013, Lisa Ciacci has served as the director of the SmartPath to College program. Prior to this role, Lisa served as the assistant director of the College Board Advocacy & Policy Center where she managed Advocacy initiatives between K-12 districts and postsecondary education systems to inform and influence public policy and practice.

College clubs can be led by any school faculty member that displays enthusiasm for postsecondary success for all students.

## Materials & Resources

The Guide to College Clubs aims to engage students in grades 9-12 whom are least likely to receive college readiness support. Educators, students, and parents can utilize the free lesson plans and resources for postsecondary readiness and planning. College clubs require a dedicated classroom or lab space. Frequent access to computers allows for successful implementation of club lessons and activities.



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# Creating a Fantasy World Through Photography

*“Using smartphones or tablets, photo-editing apps, and their imaginations, students create fantastic photo-stories using toys.”*



The *Toy Photography* project allows students to become writers, storytellers, art directors, and stage/costume designers by using toys. Each student creates a fantasy world where toys, characters, and story come alive in a single photo image.

Students must first come up with a story or theme for their photograph. Then they gather toys, props, lighting from home or from the classroom, and use their phones, tablets, or digital cameras to capture visually stimulating images. Students are encouraged to use photo editing apps, most of them free, from their smartphones. These “set designers” create backgrounds, scenes, use different lighting sources, and anything else to make their “toy story” come to life. Students submit at least 10 final edited images on a USB or memory card. Then a top image is printed, matted, and displayed for all see.

Student creativity ignites with the *Toy Photography* project and will become a favorite class assignment.

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### Arlete Romero

ar\_romero@dadeschools.net  
Hialeah Senior High  
Mail Code: 7111  
305-822-1500  
Principal: Heriberto Sanchez

## Students



The entire class of students ages 16-18 participated. This project can be adapted to accommodate smaller groups, younger ages, and varying abilities. Also, themes, ideas, or characters can be assigned. The project can adapt to the language arts curriculum by including writing along with the toy photography assignment.

## Staff



Arlete Romero has been teaching for Miami-Dade County Public Schools for nearly six years. She was selected as Rookie Teacher of the Year in 2011 at her school site, and became a semi-finalist for Region I. Ms. Romero worked with the Race to the Top Item writing committee for the

Visual Arts and was an Executive Board member serving as Recording Secretary for the Dade Art Educators Association from 2011-2013.

## Materials & Resources



The setup can take place anywhere. Students can use the classroom, outdoors, or any space where they can create a scene. The teacher and students can provide materials such as fabrics, large colorful papers, lamps, flashlights, shoe boxes, paint, color pencils, toys, figurines and found objects. Visual resources can be found online, and a fieldtrip to a museum, art gallery, or art district is encouraged.

## Standards



### Next Generation Sunshine State Standards (NGSSS) for the Arts

VA.912.C.1.1: Integrate curiosity, range of interests, attentiveness, complexity, and artistic intention in the art-making process to demonstrate self-expression.

VA.912.C.1.2: Use critical-thinking skills for various contexts to develop, refine, and reflect on an artistic theme.

VA.912.F.1.4: Use technological tools to create art with varying effects and outcomes.

VA.912.F.3.1: Use technology applications and art skills to promote social and cultural awareness regarding community initiatives and/or concerns.

# Launch Party: Get Started Up!

*“Students use critical thinking in math and language arts to develop a for-profit or non-profit business idea and compete against their peers for funding.”*

Get young entrepreneurs ready to be thrown in The Tank! *Launch Party* allows students to use critical thinking in math and language arts to develop either a for-profit or nonprofit business idea. Ultimately, students will compete against their peers to have their idea funded. Students learn startup, the design process and protocols for entrepreneurs through a series of mini-lessons that combine math and entrepreneurship. During these sessions, students research and discuss entrepreneurial concepts such as innovation, business structures, and characteristics of successful businesses. Time is given each week for students to develop their business idea’s proposal, minimally viable product, and fine tune their pitch using their language arts skills.

At the end of nine weeks, “Shark Tank” sessions are held in which the young entrepreneurs pitch their business idea to the class. The “sharks” then use a rubric, based on what they have previously learned, to score each business proposal. The scores from each student completed rubric are averaged. Then the three students with the highest averages are chosen as the winners and awarded startup funding to buy supplies for their business idea. The remaining students choose which business idea they are most interested in and become founding members of that winner’s business.



## Students

Students who participated in the *Launch Party* were in a mixed grade level, high school math class of 25 to 30 pupils. On average, meeting two hours per week, over the course of nine weeks enabled students to complete the activity. This project can be adapted for grades 4-12 and can be used as a cross-curricular project, a core class, or vocational class project. It is appropriate for all achievement levels including SPED.

## Staff

Tandy Caraway has been a classroom teacher for more than 14 years. Awards she has achieved during her teaching tenure include being selected as Teacher of the Year at her school site, a National Honorable Mention for the American

Board for Certification of Teacher Excellence, the Spot Success Award, and the recipient of a Teach and Inspire Fellowship. Ms. Caraway has garnered multiple grants: the Florida Learn & Serve pilot and renewal grants, the State Farm/ University of Florida grant, the Sprint Character Education grant, and a Rookie FIRST grant.

## Materials & Resources

Materials students need to work on their project include, paper, ink, poster board, markers, computers or devices with internet access, spreadsheet software. For the presentation, students need a projector, presentation or video software such as Microsoft PowerPoint or Photostory3.

## Standards Language Arts Florida Standards

LAFS.K12.L.3.6: Acquire and use accurately a range of general academic and domain-specific words

LAFS.910.SL.1.1: Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 9–10 topics, texts, and issues, building on others’ ideas.

## Math Florida Standards

MAFS.K12.MP.1.1: Make sense of problems and persevere in solving them.

MAFS.K12.MP.2.1: Reason abstractly and quantitatively.

MAFS.8.F.2.4: Construct a function to model a linear relationship between two quantities.

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## Tandy Caraway

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American Senior High  
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305-557-3770  
Principal: Francisco Garnica

# Successful Studentpreneurs

“Motivate students to study business and create a product where they participate in a mock ‘Shark Tank’ to see if their product has what it takes to be the next big idea.”



Everyone wants to make money, but what needs to happen for a business to be successful? This project, *Successful Studentpreneurs*, motivates students in grades 3-6 to study the business plan process. In the end, students participate in their very own mock “Shark Tank” to see if their product has what it takes to be the next big idea.

First, students learn about kids who have created their own successful businesses. The class studies the novel, *The Lemonade War*, by Jacqueline Davies. After reading the novel, students are divided into two teams to analyze business strategies and debate which strategy was the most successful in the book.

Then students look at business from various informational texts. Students work collaboratively to analyze the texts and to create their own business idea.

Students demonstrate their business knowledge as they become Studentpreneurs. They create a sales pitch, dress for success, and present their idea at a “Shark Tank” event. Teacher “investors” listen to the sales pitch and select which ideas would be most profitable.

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### Sandy Castellon

scastellon@dadeschools.net

Cutler Ridge Elementary

Mail Code: 1241

305-235-4611

Principal:

Adrienne Wright-Mullings

## Students



Thirty third grade students, varying in academic ability, participated in this project. All students showed interest in learning more about becoming entrepreneurs during the eight weeks that they worked on the project.

This project can most definitely be adapted to any student in grades 3-6 and can be modified to include additional ESOL and ESE strategies.

## Staff



For the past two years Sandy Castellon has been a reading/language arts teacher for third grade students. Previously, Ms. Castellon served as an elementary media specialist for 12 years. Ms. Castellon has been awarded the Florida Learn and Serve Grant, as well as numerous

grants from The Education Fund, including a Disseminator Grant, Teacher Mini-Grant and Adapter Grants.

## Materials & Resources



Copies of *The Lemonade War* cost \$1 from Scholastic Book Clubs. Additional supplemental books for the third phase include *Business for Kids 101* (for beginners); *How to teach entrepreneurship to your children; Better than a Lemonade Stand!*, by Daryl Bernstein and Rob Husberg; *New Totally Awesome Business Book for Kids*, revised edition by Arthur and Rose Bochner; *Kidpreneurs: Young Entrepreneurs with Big Ideas!*, by Adam and Matthew Toren; and *Beyond the Lemonade Stand*, by Bill Rancic.

## Standards



### Language Arts Florida Standards

LAFS.3.RI.1.1: Ask & answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.

LAFS.3.SL.1.1: Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 3 topics and texts, building on others' ideas & expressing their own clearly.

### Next Generation Sunshine State Standards

SS.2.E.1.2: Recognize that people supply goods & services based on consumer demands.

SS.2.E.1.4: Explain the personal benefits & costs involved in saving and spending.



## M-DCPS TEACHERS & ADMINISTRATORS

The Education Fund thanks you for your donations!

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**For more information:** Contact Edwina Lau, IMPACT II Program Director, at 305.558.4544, ext. 113 or [impact@educationfund.org](mailto:impact@educationfund.org).

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