

THE EDUCATION FUND'S

2017-2018 Ideas with

# IMPACT



THE  
EDUCATION  
FUND

FOR EXCELLENCE IN MIAMI-DADE PUBLIC SCHOOLS

## Idea EXPO

The Teacher Conference

Get *CREATIVE*  
with tech tools &  
hands-on projects

see pages 45-50

Earn **9**  
M-DCPS  
Master  
Plan Points  
see back cover

\$\$\$  
for your  
CLASSROOM  
see page 5

Odysseus, Zombies,  
& Drones, OH MY! &  
**32** other  
inspiring  
ways to cover  
FLORIDA STANDARDS



# 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.

- ★ \$51 million raised for public schools
- ★ 34,589 students' eating habits improved through an edible garden laboratory initiative
- ★ 34% increase in college enrollment attained as part of a national demonstration project
- ★ \$8.1+ million in free supplies for classrooms, benefitting 1+ million students
- ★ \$2.7 million granted to teachers to foster student achievement in 4,700+ classrooms
- ★ 10,500+ computers to students and parents
- ★ \$1.1+ million raised for schools' visual arts programs
- ★ 2,100 business professionals teach for a day

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### The Education Fund's 2017-2018 Ideas with IMPACT

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for generously donating the paper!

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# Driving a **Brighter Future**

For more than 65 years, Ford Motor Company Fund has worked to improve people's lives, investing \$1.5 billion to support innovative programs in Community Life, Education, Safe Driving and the Ford Volunteer Corps.

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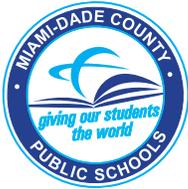
The Education Fund's Ideas with IMPACT program offers teachers new ways to engage South Florida students.

Ford salutes your efforts to create a stronger, more innovative future for your classroom.



Go Further

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

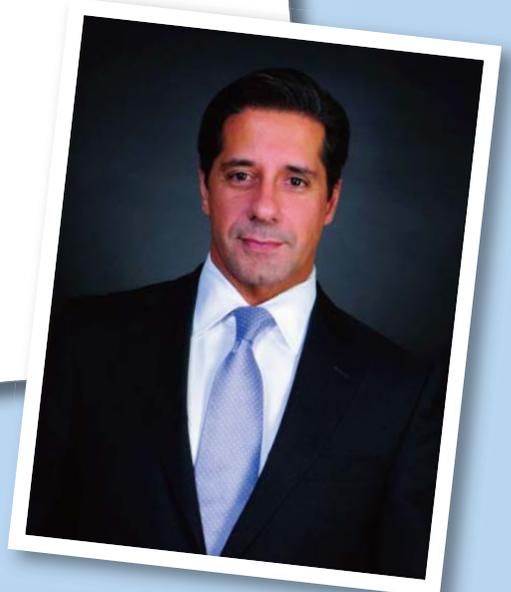


For more than 30 years, The Education Fund has been a key partner of Miami-Dade County Public Schools, sponsoring initiatives that support teachers with networking, training opportunities, grant funding, and more. By providing teachers the opportunity to be catalysts for innovation in the classroom through programs such as Ideas with IMPACT (formerly IMPACT II), The Education Fund provides teachers the resources to bring their ideas to life and an avenue to share proven ideas with others. In this way, their leadership is rightly recognized and highlighted.

I have attended the Ideas with IMPACT EXPO- The Teacher Conference for many years, talking with teachers who value the exchange of ideas at this annual event. Having been a teacher, I understand the need to stay ahead of the curve. I applaud The Education Fund for continuing to include all subjects - not only STEM and entrepreneurialism - and for incorporating lessons that celebrate our diversity and promote inclusiveness.

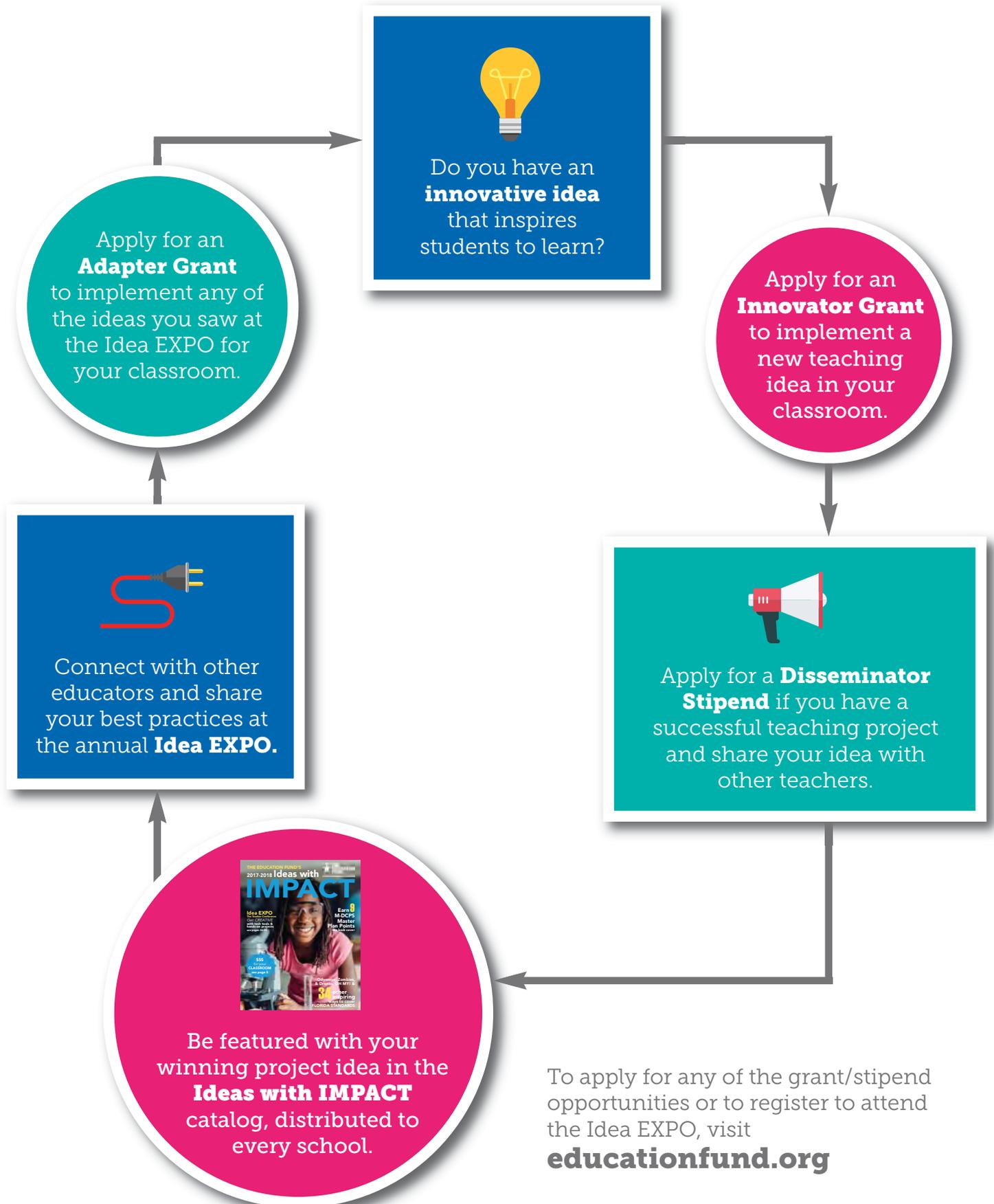
As we know, Ideas with IMPACT facilitates the sharing of innovative, cost-effective teaching ideas in a user-friendly network that includes the Ideas with IMPACT catalog, curriculum "how-to" Idea Packets, The Idea EXPO - The Teacher Conference, and Innovator and Adapter Grants. I commend the dedicated educators who contribute their time and talents to the IMPACT network. You make a difference for our students and our community.

Alberto M. Carvalho  
Superintendent of Schools



# Ideas with **IMPACT**

Building a Network of Support and Best Practices





# Your Classroom. Our Financial Expertise.

We offer a free, one-of-a-kind program to help students K-12 develop strong financial skills.

## We have learning resources for everyone.



### Elementary School

They are never too young to learn the history of money and how it works. We use storytelling to teach children the basic principles of money, saving and banking.



### TD Bank Learning Center Ages 13+

This mobile-friendly platform provides you with 10-minute personal finance lessons anytime, on any device.



### Middle School

The perfect age to learn more about saving, budgeting, and what a checking account is all about.



### Virtual Stock Market Simulator Ages 13+

Learn how to manage a portfolio, increase your knowledge, and lead a virtual stock market challenge with your class or organization.



### High School

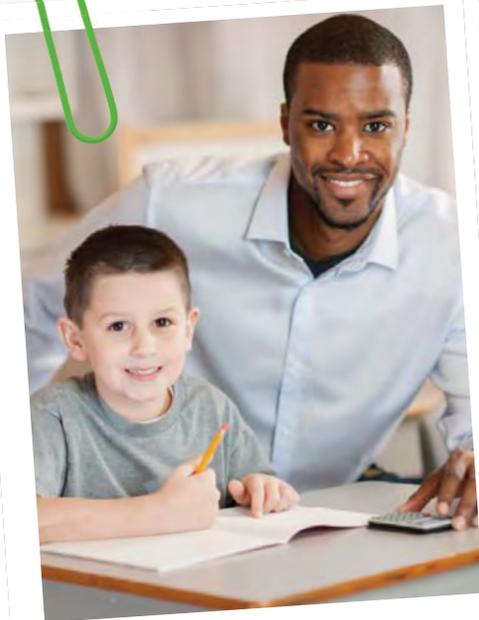
Prepare students for their financial futures. They'll learn about opening and managing a checking account, ATM cards, income taxes and car insurance.

Visit one of our 28 Miami Dade locations or visit [tdbank.com/financialeducation](https://tdbank.com/financialeducation) to learn more.



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1-888-751-9000 | [tdbank.com](https://tdbank.com)



## FOR MORE INFORMATION

Visit one of TD Bank's 28 Miami-Dade locations or visit [tdbank.com/financialeducation](http://tdbank.com/financialeducation)

# TD Bank Youth Financial Education

Helping students develop strong financial skills in schools, online, and at local TD Bank stores

The TD Bank Financial Education Program was created and implemented to help children develop strong financial skills, in school and online. Our trained bank instructors present in a fun and interactive way. 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. Programs are flexible, can adjust to fit your class schedule and takes only one hour in class or can be spread out to include multiple lessons over the course of several days.

TD Bank also offers students an opportunity to go behind the scenes and see how a bank operates with the Junior Banker Store Tour. Designed for first through fifth grades, students get to step inside the vault, meet the tellers, and learn how the ATM works.



“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.”

## STUDENTS

Lessons for grades K-12.

## MATERIALS & RESOURCES

### 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.

### TD Bank Instructors

TD Bank has trained bank instructors available to visit classrooms to teach their financial education lessons.

### 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 works.



## FLORIDA STANDARDS

### MATHEMATICS

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.

### SOCIAL STUDIES

SS.4.FL.3.1: Identify ways that income is saved, spent on goods and services, or used to pay taxes.

SS.4.FL.3.3: Identify ways that people can choose to save money in many places – for example, at home in a piggy bank or at a commercial bank, credit union or savings and loan.

SS.4.FL.3.5: Explain that when people deposit money into a bank (or other financial institution), the bank may pay them interest.

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# Financial Freedom: Cash Flowin' to the Future

Through financial literacy workshops, students learn responsibility, including how to plan for college

Inspired by her own personal experience as a young college student and not fully understanding financial literacy concepts, Natalia developed this project to provide her students, many of whom are first generation and are from low-income communities, with tools and resources as they seek access to higher education and financial well-being. The project is implemented through a series of workshops on topics such as finance fundamentals, educational planning, money management, budgeting, saving and investing, student loans, student loan repayment, credit and debt management, understanding your credit score and report, and identity theft and fraud. Each workshop includes a pre- and post-assessment to effectively measure the learning gains from the presentation.



## CONTACT INFORMATION NATALIA ALLEN

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**DOWNLOAD PROJECT INFO:** <http://bit.ly/2v01r9U>

## FLORIDA STANDARDS

### SOCIAL STUDIES

SS.8.FL.1.2: Identify the many decisions people must make over a lifetime about their education, jobs, and careers that affect their incomes and job opportunities.

SS.912.FL.1.3: Evaluate ways people can make more informed education, job, or career decisions by evaluating the benefits and costs of different choices.

SS.912.FL.4.12: Discuss that consumers who use credit should be aware of laws that are in place to protect them.

SS.912.FL.4.2: Discuss that banks and financial institutions sometimes compete by offering credit at low introductory rates, which increase after a set period of time or when the borrower misses a payment or makes a late payment.

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“My students have become more invested in their futures.”

## STUDENTS

The average group size is 20 students depending on the the class size. More than 200 students participated in the project from different schools in the district in grades 10th-12th, with meeting times varying. This project can easily be adapted to other ages, achievement levels, and either small or large groups.

## MATERIALS & RESOURCES

Materials needed depend on the workshop presentation teachers would be interested in implementing. All the books and materials needed such as the Planning for College workbooks, the Let's Talk Credit booklets, and the student modules, can be provided along with the pre- and post-assessments for the students.

Resources include student workbooks, informational pamphlets, bookmarks with important deadlines, curriculum, PowerPoint presentations. Curriculum and online resources are available from the National Endowment for Financial Education.

## ABOUT THE TEACHER

Natalia Allen has been teaching for four years in Miami and New York City public schools. She received a Bachelor of Journalism and Bachelor of Art in Political Science from the University of Missouri-Columbia and her Master of Science in Education from the University of Miami. She began developing the Financial Freedom: Cash Flowin' to the Future project in August 2016.





### CONTACT INFORMATION SUSAN JULEVICH

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# Pop, Pop, and **Away!**

Students learn math skills by making change for purchases, adding several items, and budgeting for business needs

Popcorn anyone? How about some juice to go with it? That is what students will ask when you approach their popcorn booth at the end of each school day. In an effort to increase math computation skills, improve classroom behavior, and boost student morale, this innovative project of popping corn has exceeded all goals as students actively participate in owning and operating their own business. A learning environment of popping corn, packaging it into separate boxes, and selling it to students and school personnel, promotes true team collaboration and makes students feel more grown up and eager to do well in math class so they can wear the chef hats and aprons. Students decide as a group which educational materials should be purchased with profits to benefit their grade level. In addition to academic gains, students develop more independence, self-confidence, self-esteem, and come away from the experience more knowledgeable about the economic concept of supply and demand.



“ No one complains when it is time for math.”

### STUDENTS

This project involved more than 200 second grade students at varying academic levels, with many below grade level and using iReady Math. The students were instructed how to perform various tasks in the booth during their recess period. This project can be adaptable to any grade level.

### MATERIALS & RESOURCES

Materials include the popcorn booth, extension cords, popcorn pre-mixed with coconut oil, boxes to sell the popcorn in, fruit juice, and project materials (provided). Equipment was purchased from Amazon and the supplies from Gordon Food Supplies. Resources include the Internet.



### ABOUT THE TEACHER

Susan Julevich has been a Miami-Dade County Public Schools teacher for 18 years. Through her passion for writing, she has written articles for the *Miami Herald* and won a full scholarship to St. Thomas University through a "Tell Us Your Life Story" essay competition. Ms. Julevich was the Media Specialist for a number of years at the Juvenile Justice Detention Center School where she acquired a TV studio completely paid for by WLRN. She was chosen by Channel 23 Univision as one of the top 10 educators in Miami and was featured in a commercial.

### FLORIDA STANDARDS

#### MATHEMATICS

MAFS.2.NBT.1.2: Count within 1000; skip-count by 5s, 10s, and 100s.

MAFS.2.OA.1.1: Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions.

MAFS.2.OA.2.2: Fluently add and subtract within 20 using mental strategies

MAFS.K12.MP.6.1: Attend to precision.

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

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# SmartPath: Guide to College Clubs

Empowering low-income and first generation students with strategies and services to obtain higher education

The goal behind College Clubs is 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. This project addresses 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 assists schools in establishing college clubs for students in grades 9-12 and 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.



## CONTACT INFORMATION ANA BARRETO-MALONEY, LAUREN JEAN, AND ZOE MADISON

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**PHONE:** 305.634.2621

**DOWNLOAD PROJECT INFO:** <http://bit.ly/2v7X20K>

“Students not only learn the skills needed to apply for and succeed in college, but also to make college the goal.”

## FLORIDA STANDARDS

### ENGLISH LANGUAGE ARTS

LAFS.1112.L.3.6: Acquire and use accurately general academic and domain-specific words and phrases, sufficient for reading, writing, speaking, and listening at the college and career readiness level.

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.

### GIFTED

G.K12.1.1.2: Use a variety of professional journals, professional databases, and college textbooks to make connections between and/or among fields of discipline.

## SPONSORED BY



## 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.



## MATERIALS & RESOURCES

College Clubs require a dedicated classroom or lab space. Frequent access to computers allows for successful implementation of club lessons and activities.

Cash grants are available through The Education Fund to all M-DCPS high school teachers wishing to implement a College Club at their school. High school teachers in City of Miami schools are targeted through funds provided by the Miami Bayside Foundation. Grant recipients must conduct at least one college tour during the course of the 2017-18 school year. To apply, visit [educationfund.org](http://educationfund.org).

## ABOUT THE TEACHERS

Miami Jackson Senior High School is “Making It Happen” with College Clubs. Together, Assistant Principal Ana Barreto-Maloney, CAP Advisor Zoe Madison, and teacher Lauren Jean have implemented a College Club each year at their school since 2013. Since its inception, College Clubs at Miami Jackson have served more than 300 students, of whom 98% have continued on to higher education.



## CONTACT INFORMATION SUSAN FELICIANO

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**DOWNLOAD PROJECT INFO:** <http://bit.ly/2fZSRI8>

# Eco Prints

Students explore eco printing techniques, identify a variety of colors, experiment with natural materials, and create botanical prints

Did you know you can produce a variety of color hues from food items in your kitchen or garden? In this out-of-the-box workshop, students take risks, push boundaries, think creatively, and experiment more as they discover nature's palette. Eco Prints, a natural dyeing process using plants, flowers, leaves, vegetables, and fruits on cloth/paper with heat/steam, makes the art of producing an accordion book a unique experience for students. The transfer of natural pigment from the flowers to the paper with the use of steam forms intricate designs and patterns. While minimizing environmental impact, this collection of floral and vegetal prints entices further desire for students to find additional ways to use and make pigments that are natural, sustainable, and renewable.



**“** This innovative approach to pigment and color will benefit your students and make a positive impact on their overall academic achievement. ”

## STUDENTS

More than 100 elementary school students grades 2nd-5th participated in this project. They meet one hour a week for four weeks to create the eco prints, arrange the botanical prints, assemble the accordion book, and design a cover. This project can be adapted to any grade level and educators. It works well with small groups and can be expanded for larger groups.



## MATERIALS & RESOURCES

Materials include a large metal pot; water; small portable burner; 6-8 pieces 8" x10" paper (watercolor paper, book pages, coffee filters, etc.); white vinegar; newsprint, cotton fabric; strainer; cotton twine; rubber bands; tin cans; binder clips; wooden spoon; sticks; scissors; binding thread; tapestry needle; apron; tongs; space/equipment; and a protected work area. Resources include field trips to Fairchild Tropical Botanic Garden, Coral Gables Museum, Frost Science Museum, school media center, and Internet.

## ABOUT THE TEACHER

Susan Feliciano has 19+ years of experience in art and museum education, specializing in designing and delivering dynamic art programs to diverse communities. She received a Master of Science in Art Education from FIU. Ms. Feliciano was the recipient of the Fulbright Memorial Fund-Japan from the Institute of International Education. She was selected to write and review the Florida state-wide test design for Visual Art. Ms. Feliciano was an Innovator Grant recipient for the interdisciplinary project, "Sunrise, Sunset."

## FLORIDA STANDARDS

### VISUAL ARTS

VA.5.S.1.1: Use various art tools, media, and techniques to discover how different choices change the effect on the meaning of an artwork.

VA.5.S.1.4: Use accurate art vocabulary to communicate about works of art and artistic and creative processes.

VA.68.O.1.1: Make connections between the structural elements of art and the organizational principles of design to understand how artwork is unified.

VA.912.H.3.1: Synthesize knowledge and skills learned from non-art content areas to support the processes of creation, interpretation, and analysis.

VA.912.H.3.3: Use materials, ideas, and/or equipment related to other content areas to generate ideas and processes for the creation of works of art.

## SPONSORED BY



**PEREZ TRADING COMPANY**



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.

Humana  
Foundation

GCHZFMEN 0717

“There is hope  
everywhere.”  
— Anne Sexton

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

# The Education Fund's Food Forests for Schools



## HOW IT ALL BEGAN

In 2007, with support from the Health Foundation of South Florida and Miami-Dade County Public Schools, The Education Fund piloted one of the first edible garden programs in the U.S. Designed as a student-centered, seed-to-table learning program integrated into all subjects, elementary school students learned healthy eating habits, while improving their academic achievement. Due to the program's success, The Education Fund's work now reaches 51 schools, benefiting more than 34,000 students annually.

BEFORE



AFTER



*During the 2016-2017 school year, there was an 80% increase in the science scores of students participating in Food Forests for Schools."*

## BUILDING FOOD FORESTS

In 2015, The Education Fund drastically changed its model from a focus on the typical raised bed garden to one that builds entire forests of food on school property. This cutting edge program teaches students and their families healthy eating habits, while providing outdoor eco-labs for science and other student lessons. With winding paths, these 'forests' include trees, bushes, vines, plants and ground cover that are entirely edible. Since the plants used for this program are perennials, they do not need to be replanted. Additionally, the Food Forest design and methods drastically increase the productivity. And last but not least, our Food Forests are based on unique, nutritionally dense items that grow like weeds in South Florida.

*"Food Forests have changed the way my daughter thinks about healthy eating."*

Parent, Spanish Lakes Elementary

## STUDENTS

From the moment of the first 'community' build, students are excited to get their hands dirty and grow their own foods. Using the food forests as extensive outdoor learning labs, students perform food-related science experiments, use math concepts in real life situations, write recipes, and learn about weather, ecology and other scientific concepts. Teachers also report that food forests help calm and focus children, and that the food forest effect continues back in the classroom after an outdoor learning session.

# The Education Fund's **Food Forests for Schools** (continued)

## HOW WE HELP SCHOOLS

The Education Fund provides the design and expert Food Forest gardeners to help schools get started. A 'build' after school or on a weekend launches the Food Forest, with students, parents, teachers and other community members involved. Regular visits from The Education Fund staff, expert gardeners, and other experts provide onsite support and training.

We help teachers learn how to harvest and use our unique Food Forest items as well as how to enhance science, mathematics, language arts and other lessons. The Education Fund's offsite workshops also provide teacher training on Food Forestry methods, curriculum usage, and how to hold parent workshops to encourage families to change their eating habits. Even cafeteria managers are trained, specifically on how to use fresh fruits and vegetables from the Food Forests to enhance school lunches.



## RESULTS:

- 50% average improvements in students' eating attitudes and habits each year
- 80% increase in participating students science scores last year
- 1,000+ times Food Forest produce used in MDCPS cafeterias
- 48,798 harvest bags sent home with the students
- 16 schools with Food Forests
- 35 schools in transition to Food Forests

## AND MUCH MORE...



## WHAT YOU CAN DO

Attend a Food Forest garden workshop at The Education Fund's Idea EXPO. Talk to your principal. If your school leadership is interested in transforming your schools' edible garden into a Food Forest or starting one from scratch, let us know. While we do not currently have funding to work with schools outside our current network of schools, it may be possible to work together to find funds to transform your schools' garden into a Food Forest. For more information visit [educationfund.org](http://educationfund.org).

## SPECIAL THANKS TO:

Food Forest Program Sponsors



Ideas with IMPACT Section Sponsor





## CONTACT INFORMATION SAM CHILLARON

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**DOWNLOAD PROJECT INFO:** <http://bit.ly/2v8bCoV>

# Tools, Teepees, and Trellises

Learn basic garden construction  
and become a DIY champ!

There are many ways to create basic garden structures for edible plants to grow on. Start with a basic teepee and work your way up to an arbor! This is a project that students will never forget.

Through hands-on, simple construction activities, students learn geometry, measurement, proportion and exercise their critical thinking skills. Students will be able to create their own designs and models of plant support structures. They will also collaborate to build a full scale structure for their edible school gardens. Students are able to explain, in writing, the necessity for a support structure for certain edible plants and how those plants have adapted to climbing.

This project challenges students to be creative with their resources while encouraging them to grow food and beautify their school. Students deepen their understanding of plant science while learning mathematics and language arts skills!



“ Students are not only understanding plant science, but are learning mathematics and language arts skills as well.”

## 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.

## MATERIALS & RESOURCES

The project requires an edible school garden site. The following items are required for models: wood scraps (blocks of balsa wood, toothpicks, craft sticks, roll of wicker or rattan), glue, twist ties, string, pencils, and paper. The following may or may not be required for a life size trellis: bamboo poles of varying lengths and diameter or lumber in various lengths and widths, zip ties, drill, screws, rope, and saw.

## ABOUT THE TEACHER

Sam Chillaron is the Garden Supervisor for The Education Fund's Food Forest for Schools program. He has more than 10 years of experience with working on farms and growing and managing edible gardens in schools and communities. He also runs his own plant nursery where he propagates many of the rare, tropical, perennial plants that are currently used by The Education Fund in the school food forests. He has been instrumental in the installation and maintenance of the 16 food forests grown with The Education Fund and has extensive experience in working in a garden setting with teachers and students.



## FLORIDA STANDARDS

### ENGLISH LANGUAGE ARTS

LAFS.K12.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.

### MATHEMATICS

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

MAFS.3.MD.2.4: Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units—whole numbers, halves, or quarters.

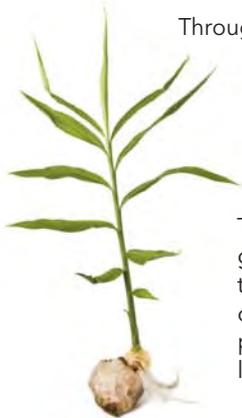
## SPONSORED BY

# Humana Foundation

# 50 Shades of Green

Welcome to the shady side of gardening!

Who says that edible plants can't grow in the shade? Welcome to the world of food forests... the shady side of gardening! Learn about fast growing trees for your garden and the food forest plants that will thrive beneath them in the cool shade. Explore the benefits of growing an edible canopy. Stop throwing shade and start keeping students and plants out of the smoldering sun!



Through scientific observation, students are able to identify the growth parameters of plants that thrive in a food forest environment. They are able to identify the parts of the plant involved in photosynthesis and how certain plants cope or adapt when planted with less sunlight. Students propagate, harvest, research, and experience eating the exotic plants.

This project targets critical thinking skills. Choosing plants to grow in areas with little to no sunlight is a common problem that arises in agriculture and landscaping. Students are challenged to discover areas with low light conditions, identify plants and their adaptations, and plant beautiful, nutritious landscapes that improve their own health and well-being.



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**DOWNLOAD PROJECT INFO:** <http://bit.ly/2wi9i2J>

## FLORIDA STANDARDS

### SCIENCE

SC.3.L.14.1: Describe structures in plants and their roles in food production, support, water and nutrient transport, and reproduction.

SC.3.L.14.2: Investigate and describe how plants respond to stimuli (heat, light, gravity), such as the way plant stems grow toward light and their roots grow downward in response to gravity.

SC.3.N.1.1: Raise questions about the natural world, investigate them individually and in teams through free exploration and systematic investigations, and generate appropriate explanations based on those explorations.

SC.3.N.1.6: Infer based on observation.

### SPONSORED BY

# Humana Foundation



*Discover how to plant beautiful, nutritious landscapes that improve not only well-being, but students' grades too!"*

## 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 depending on available space for planting. It can also be adapted to any grade or academic level.

## MATERIALS & RESOURCES

The project requires at least 25 square feet of outdoor planting space. 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.



## ABOUT THE TEACHER

Eduardo Recinos has been a teacher since 2002 and has more than 20 years of experience growing edible gardens. As Senior Program Manager for The Education Fund's Food Forest for Schools program, he has designed and installed more food forests for elementary public schools with his team than anyone else in the nation. Mr. Recinos has been invited to speak about food forests in schools by the Florida Department of Agriculture and by the FIU Agroforestry department. 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.



# Learning A-Z



## MAKING AN IMPACT

### Empowering All Children To Read by Grade 3

Students who can read proficiently by 3rd grade are more likely to graduate from high school and go on to college. Learning A-Z is dedicated to ensuring the future success of all students by creating blended learning curriculum products that teachers use to guide young learners to reading proficiency by 3rd grade.

We are proud to partner with The Education Fund to help promote innovation and excellence in teaching.

Learn more at [www.LearningA-Z.com](http://www.LearningA-Z.com)



# Billboard Text Features Project

Billboards bring literature to life in an eye-catching display

Want to jazz up your hallway while at the same time bring literacy into the spotlight? Then let students' creative juices flow to produce eye-catching billboard book report displays. These displays promote literacy and advertise multiple literary elements in a text-features style billboard format. Students work in pairs to read a book and then use different types of text-features to display literary elements such as a collage or map for set-

ting, a playbill-like list for main characters, an illustration for climax, a star-rating system for opinion, or a timeline for sequence of events. This project is an easy way for students to make a presentation in an appealing style. Students develop a stronger understanding of the information in their book reports as they must also be able to share it with an audience in a memorable format.



## CONTACT INFORMATION ILEEN MARTIN

**SCHOOL:** Southwood Middle School

**PRINCIPAL:** Raul F. Garcia

**EMAIL:** i-martin@dadeschools.net

**PHONE:** 305.251.5361

**DOWNLOAD PROJECT INFO:** <http://bit.ly/2vSVudY>

## FLORIDA STANDARDS

### ENGLISH LANGUAGE ARTS

LAFS.K12.L.1.1: Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.

LAFS.K12.L.1.2: Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.

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.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.

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

## SPONSORED BY



*This project fosters creative expression and understanding of a lesson concept that goes beyond traditional paper-pencil method.*

## STUDENTS

Five classes of 8th grade students participated in this project, meeting twice a week with their partners in class and at home over the course of two months. The project can be adapted to other ages and achievement levels and used with small and large groups. Other subject areas can use this text-features style billboard project to display students' understanding of learned concepts.



## MATERIALS & RESOURCES

Materials include table-space for students to work on their poster boards together, poster boards, glue, scissors, copy paper, construction paper, and various arts and crafts options for board decor.

Resources include the media center for looking up and checking out books; computer labs for Internet access and printing of informational articles.

## ABOUT THE TEACHER

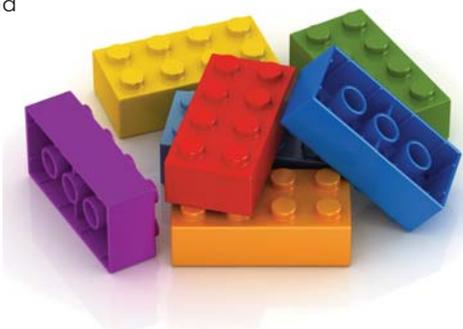
Ileen Martin has taught in the public-school system for 11 years. She is National Board Certified in ELA Early Adolescence and has her Gifted certification and M.A. in English Education from Florida International University. She has taught 6th-8th grade from Intensive to Gifted.

# Don't Let Go That **LEGO!**

A tactile approach using LEGOS motivates students to read and write

Children learn best when they experience things first-hand and within a meaningful context. In this project using manipulatives to tackle the intimidation and fear of reading comprehension and writing, students use LEGO StoryStarter to begin to develop skills in analyzing story elements, identifying genres, and enhancing personal speaking and listening abilities.

For each lesson, the teacher sets the scene and students build the story using mini figures, specialty bricks, the StoryStarter Curriculum, and StoryVisualizer Software. The learning scenarios can be set according to the educational level of students, embrace diversity and encourage students to collaborate and share ideas, concepts, and experiences.



## **CONTACT INFORMATION** **DUYSEVI MIYAR**

**SCHOOL:** Country Club Middle School

**PRINCIPAL:** Cynthia M. Prado

**EMAIL:** [dkmiyar@dadeschools.net](mailto:dkmiyar@dadeschools.net)

**PHONE:** 305.820.8800

**DOWNLOAD PROJECT INFO:** <http://bit.ly/2vXXtw1>

“ Using LEGOS has helped my students read, write, and speak with confidence in a range of contexts.”

## **STUDENTS**

This project can be used with students primarily in K-8th grade. It is highly recommended for ESE and ELL teachers and students in all grade levels across the curriculum and in content areas such as science and social studies. The class size can vary from small groups of three to five students to a classroom of 25-30.



## **MATERIALS & RESOURCES**

Materials include the LEGOS StoryStarter Core Set; StoryStarter Curriculum Pack; and the StoryVisualizer Software.

Resources include computers for Internet access and software.

## **ABOUT THE TEACHER**

Duysevi Miyar has been teaching for the past 17 years as an ESOL and ESE Language Arts teacher. She has presented at the TESOL conference for many years and is currently studying for her doctorate in instructional technology and distance education. No assistants or volunteers were needed for the project.

## **FLORIDA STANDARDS**

### **ENGLISH LANGUAGE ARTS**

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

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

LAFS.K12.W.2.6: Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others.

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, and research.

## **SPONSORED BY**



# Slamming My Story

Students express their beliefs, feelings, and opinions about their lives and community issues



“Slamming My Story” is a creative writing project that allows students to become more involved in their community and to develop 21st century skills such as public speaking, writing, and networking abilities that will help them be successful on an academic, professional, and social level. Students visit museums, libraries, and community organizations to learn about social issues. They participate in Journal Jams, Think Tanks, Socratic Seminars, and are prompted to compose a SLAM Poem and present it to their school population and the community-at-large. This enables them to be empowered and move from a fixed mindset to a growth mindset where they learn to empathize with others and build relationships. More importantly, students practice reflecting consciously, constantly, so that they can learn about themselves, the world around them, and how they can help to improve the conditions of their respective communities and the world.



## CONTACT INFORMATION PRECIOUS SYMONETTE

**SCHOOL:** Miami Norland Senior High School

**PRINCIPAL:** Reginald E. Lee

**EMAIL:** [psymonette@dadeschools.net](mailto:psymonette@dadeschools.net)

**PHONE:** 305.653.1416

**DOWNLOAD PROJECT INFO:** <http://bit.ly/2vSNaeF>

## FLORIDA STANDARDS

### LANGUAGE ARTS

LA.910.4.1.1: The student will write in a variety of expressive and reflective forms that use a range of appropriate strategies and specific narrative techniques, employ literary devices, and sensory description.

LAFS.910.W.2.5: The student will develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.

LAFS.910.W.1.1: Delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is valid and the evidence is relevant and sufficient, identify false statements and fallacious reasoning.

### SPONSORED BY



“All students should know that they matter, beyond a shadow of a doubt.”

## STUDENTS

Two hundred students with varying grades and reading levels were involved with this project, meeting on average, twice a week for about two to three hours for about a month to create one SLAM Choreopoem. This project can be adapted to any age or achievement level and can be used within any size classroom. Poems can be adjusted by grade level and questions may have to be created initially, for younger groups, depending on reading levels and goals.

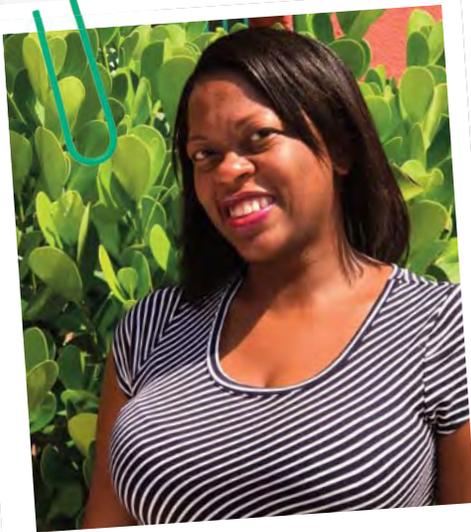


## MATERIALS & RESOURCES

Materials include writing utensils, paper, a computer, and a comfortable writing space. It is helpful for students to use their personal devices. Handouts pertaining to Socratic Seminars, Q-A-R's, and SLAM/Spoken Word Poetry would help the lesson to flow better as well. Resources include field trips to the library, museums, parks, Town Hall Meetings, School Board Meetings, and to City Hall. Students were also able to have conversations with school board members, pastors, mayors, and other community leaders.

## ABOUT THE TEACHER

Precious Symonette grew up with a passion for writing and community involvement. She has been teaching for the past 11 years. Ms. Symonette was named the 2017 M-DCPS Teacher of the Year and recognized as a 2016 National Education Association Superhero Educator. She is an official Freedom Writers Teacher and she started the Florida Freedom Writers Foundation that helps to promote free expression both in written and verbal form.



### CONTACT INFORMATION SAMANTHA MOULTON

**SCHOOL:** Georgia Jones Ayers Middle School  
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**PHONE:** 305.634.9787  
**DOWNLOAD PROJECT INFO:** <http://bit.ly/2xlueTj>

# Fearless Like TED

Students create a speech that expresses their passion about a topic while focusing on many of their fears about speaking publicly

Do you shake in your boots or develop sweaty palms at the mere thought of speaking in front of people? Many students do, particularly when it counts for a grade. In this month-long lesson, based on the style of a TED Talk, known for being a short speech that discusses a topic, message, and a call to action, students zero in on eliminating their nerve-wracking fears of speaking in front of an audience. Through a series of brainstorming exercises, students write down their impressions of TED Talk videos and then answer journal prompts that mimic specific patterns that tend to come up in the course of a TED Talk speech. This allows students to get a feel for what their own speech should sound like and begin researching about something they are passionate to speak about. Once preparation of speeches is complete, students either perform live or via tape. Students evaluate each others' speeches with a rubric and then engage in whole-group debrief of the experience.



“The best feature of this project is the sense of success that students feel when they accomplish their TED-style talk.”

## STUDENTS

This project was completed with 7th and 8th grade students of different FSA ability levels but can be adapted for any grade level. Approximately 17 students participated from a journalism class that met every other day.



## MATERIALS & RESOURCES

Materials include a media center or an auditorium for presentation day or for students to record their video; a red rug as the focal point of the stage area; a projector and screen for visuals that the students will need to show, TED Talk planning booklets, iPADS for recording audio and video, and a Google account (optional). Books: *Talk Like Ted* by Carmine Gallo; *TED Talks* by Chris Anderson; *TED Talk Storytelling* by Akash Karia; *Well Spoken and Good Thinking* by Erik Palmer; journal prompts (provided) TED Talk sample videos: Ken Robinson, Brene Brown, Carol Dweck, Chimamanda Adichie, Richard Turere, and Mckenna Pope (available online for free)

## ABOUT THE TEACHER

Samantha Moulton has been teaching in Miami-Dade since 2009. Three of those years, she was an instructional coach supporting teachers of Language Arts, Reading, and Writing in both middle school and high school settings. She has received grant funding from Adopt a Classroom, Donors Choose, and Initiative for Education.

## FLORIDA STANDARDS

### ENGLISH LANGUAGE ARTS

LAFS.8.SL.2.6: Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate.

LAFS.68.WHST.2.4: Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

LAFS.68.WHST.2.5: With some guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.

LAFS.68.WHST.4.10: Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.

### SPONSORED BY



# Shared Moments

Reading and writing creative nonfiction encourages students to reflect on their experiences and the shared experiences of others

Whether verbal or written, the act of storytelling has always served as a way to connect people across time and place. Reading other people's memoirs can help students to recognize that the experiences of people from different backgrounds and belief systems are often connected to those of their own, leading students to develop empathy for people they never thought of having a connection with previously. Students begin the lesson by reading memoir selections and making text-text and text-self connections that encourage empathy. In preparation for writing their own memoirs, students analyze the characteristics of creative nonfiction, comparing and contrasting between this genre and fiction genres in terms of style, structure, and literary elements. Sharing their own true stories invites reflection and offers students the opportunity to make stylistic choices that reflect an awareness of their audience and encourages them to explore their own ways of connecting to the reader.



## CONTACT INFORMATION BRIGETTE KINNEY

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**PHONE:** 305.443.4871

**DOWNLOAD PROJECT INFO:** <http://bit.ly/2fYZdkD>

## FLORIDA STANDARDS

### ENGLISH LANGUAGE ARTS

LAFS.3.W.1.3: Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.

LAFS.3.W.4.10: Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.

LAFS.3.W.2.4: With guidance and support from adults, produce writing in which the development and organization are appropriate to task and purpose.

LAFS.3.W.2.5: With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, and editing.



*This memoir-writing project gives students an opportunity to reflect on their lives and identify successes, lessons learned, and transformative moments."*

## STUDENTS

This project has been used for three years with 8th grade students having reading levels from ESOL/Intensive to Advanced. The entire unit, including the primary book-length memoir study and writing project, takes approximately five weeks (25 hours) of class time. It could be adapted for a shorter duration by using shorter reading selections. By selecting grade-appropriate primary readings, the project can be adapted for any age and ability group.



## MATERIALS & RESOURCES

Materials include a selection of creative nonfiction readings (found in the basal reader and in trade books), computers or tablets for publishing, daily lesson plans, suggestions for creative nonfiction reading selections at a variety of grade levels, teaching strategies, and guidance for technology integration.

## ABOUT THE TEACHER

Brigette Kinney has taught middle school English for eight years and will be moving to senior high in 2017-18 to teach advanced 12th grade English. She is a four-time Innovator Grant recipient and two-time Idea EXPO Disseminator. The project does not require assistants at the middle and high school levels. It may be helpful to have a volunteer when implementing this project with younger students since the teacher would need to provide additional support with the publishing process.

## SPONSORED BY





## CONTACT INFORMATION MICHELLE SINGH, NBCT

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**POSITION:** Digital Convergence Facilitator and Trainer  
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**PHONE:** 305.995.7605  
**WEBSITE:** www.SinghNBCT.com  
**DOWNLOAD PROJECT INFO:** <http://bit.ly/2imgJ3d>

# Teens Taking on **Technology**

Using technology and apps, students demonstrate their knowledge of Homer's *The Odyssey*

Technology affords students the opportunity to demonstrate their knowledge on a particular subject matter in many ways. After reading a challenging text - in this case, *The Odyssey* by Homer, students utilize non-traditional, interactive means to demonstrate what they learned in a way that connects them with the real world. Options for project completion using technology include designing a webpage for Odysseus; creating a podcast, focusing on Odysseus' adventure; creating a photo documentary with pictures or artwork of the setting, characters, or events; constructing a film documentary, highlighting major events; producing a talk show, featuring characters and gods; creating a news program where characters and gods are interviewed; or designing a book, newspaper page, or magazine page. These tools and applications have the power to help students collaborate, connect, reflect, and make meaning of difficult subject matter.



“ Technological tools bridge the gap between the content that students learn and the way they retain their knowledge of the subject. ”

## STUDENTS

This project, utilizing these technological tools, is used with hundreds of students in grades 6-12 throughout the district. It can be adapted to any text, fiction and non-fiction alike and fit any subject area, grade level, class size, grouping size, etc.



## MATERIALS & RESOURCES

Materials include at least one computer, a projector, or a USB cable to attach the computer to the TV, personal smartphones or tablets for students and for lessons shared by the teacher, and prepared list of Web 2.0 tools and applications for teachers and students to utilize (provided). Resources include the school media center; Internet access; LCD projectors; and volunteer speakers to instruct on these programs.

## ABOUT THE TEACHER

Michelle Singh is a Digital Convergence Facilitator and Trainer with the Division of Instructional Technology, supporting secondary schools across Miami-Dade with technology integration. Ms. Singh's certifications and degrees include English 6-12, Reading, ESOL, Educational Technology, Gifted Education, and Curriculum & Instruction. She also holds National Board Certification in Adolescence and Young Adulthood/English Language Arts. Since 2005, she has been fortunate to receive grant funding from The Education Fund, Donorschoose.org, and Florida Learn and Serve.

## FLORIDA STANDARDS

### ENGLISH LANGUAGE ARTS

LAFS.K12.W.2.6: Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others.

LAFS.910.W.2.6: Use technology, including the Internet, to produce, publish, and update individual or shared writing products, taking advantage of technology's capacity to link to other information and to display information flexibly and dynamically.

### TECHNOLOGY

G.K12.5.3.3b-Technology - Understand: Demonstrate the ability to propose new uses for current technology.

### SCIENCE

SC.35.CS-PC.2.6: Communicate about technology using appropriate terminology.

SC.912.CS-PC.2.4: Analyze the positive and negative impacts of technology on popular culture and personal life.

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# Assurant Cares.

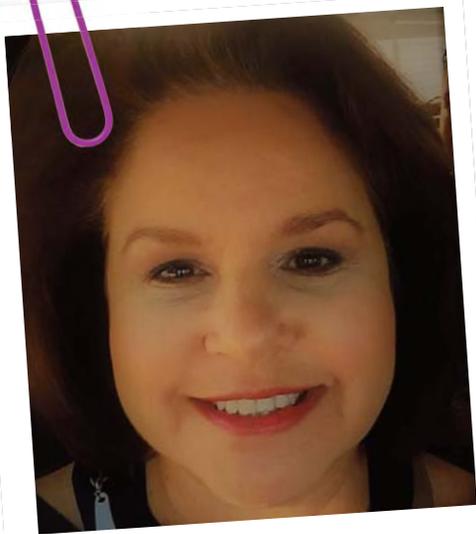
**In everything we do, we remember that people count on us.**

The Assurant Foundation is proud to support public education in Miami-Dade County. We believe in teachers, and that's why we work with The Education Fund. Through our partnership, we know that teachers will get the resources and professional development opportunities that are so valuable. Thanks for all that you do to build brighter futures.



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## CONTACT INFORMATION ZENY ULLOA

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**DOWNLOAD PROJECT INFO:** <http://bit.ly/2wxIM4P>

# Art + Coding = Math Success

Through technology, students understand and succeed in visualizing abstract math concepts

Can you explain the difference and similarities between a square and a rectangle? Students who use Studio Art lessons from Code.org certainly can, as this type of digital technology helps them to visualize abstract math concepts and improve their abstract thinking. Students create a program to complete an image using sequential mathematical and computer coding steps. Next, they differentiate between defining and non-defining attributes of triangles, squares, and rectangles and then draw the shapes to reflect defining attributes. The difference between squares and rectangles is explained with evidence consisting of the commands used to draw the different shapes. Students like using this type of real-world programming because it allows them to understand abstract concepts while practicing problem-solving skills that are necessary to succeed in today's technological world.

“To thrive in tomorrow's society, young people must learn to design, create, and express themselves with digital technologies.”

## STUDENTS

A total of 69 2nd-5th grade students, with ESOL levels 1-4 participated in this project within the Math and After-School Coding Club. Second grade students met every day for 60 minutes and the after-school coding club met twice a week for one hour each time. This project can be adapted from K-12th grade.



## MATERIALS & RESOURCES

Materials needed are provided for free from Code.org. Teachers can create their own account, input as many students as they want, assign courses, and manage student progress all for free. Some of the Unplugged lessons do not require a computer and may be printed and completed in class without a computer. Headphones and a printer are also needed. Resources include Internet access to Code.org. Teachers can contact a Computer Science expert to come to their school and give an introductory lesson. Teachers can also take either an online coding class or a full day coding class now being offered with Master Plan Points from Miami-Dade County Public Schools.

## ABOUT THE TEACHER

Zeny Ulloa has been teaching for Miami-Dade County Schools for 12 years and has a post graduate Education Specialist Degree from NOVA Southeastern University. She has been awarded numerous grants from The Education Fund and from Pets in the Classroom. In 2004, her article, "Behavior Management for the 21st Century Teacher," was published by the FLDOE.

## FLORIDA STANDARDS

### MATHEMATICS

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.

### SCIENCE

SC.912.CS-CC.1.6: Identify how collaboration influences the design and development of software artifacts.

SC.912.CS-CS.4.1: Describe a software development process that is used to solve problems at different software development stages (e.g., design, coding, testing, and verification).

SC.68.CS-CC.1.2: Apply productivity and or multimedia tools for local and global group collaboration.

## SPONSORED BY

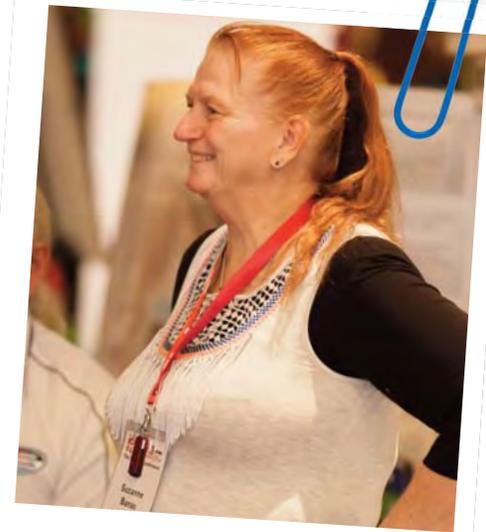
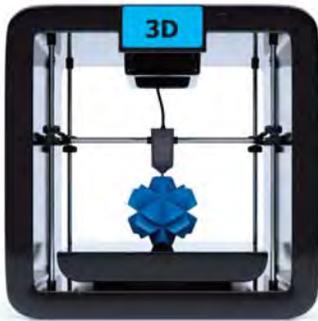


ASSURANT®

# Engineering with 3-D Printing

3-D printers inspire students to become thinkers, designers and builders

Three-D movies? That's nothing! The real excitement about 3-D is happening in the classroom where the STEM Curriculum fuses with 3-D printing. Giving students access to 3-D printers enables them to become thinkers, designers, and builders, thus giving them a jumpstart on tomorrow's challenges. By using engineering design, students define their problem, conduct background research, and begin to develop multiple ideas for possible solutions. Students create realistic 3-D mini-model prototypes (e.g. a human heart, basic cell structure, or prosthetic hand), then test, evaluate, and redesign. They focus on taking different approaches, trying again, and reassessing outcomes. This interactive project of working with 3-D printers, immerses students in inquiry and open-ended exploration while allowing them to control their own ideas and design their own investigations.



## CONTACT INFORMATION DR. SUZANNE BANAS

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**EMAIL:** sbanas@dadeschools.net

**PHONE:** 305.661.3481

**DOWNLOAD PROJECT INFO:** <http://bit.ly/2wxCemV>

## FLORIDA STANDARDS

### SCIENCE

SC.35.CS-CS.1.2: Describe how models and simulations can be used to solve real-world issues in science and engineering.

SC.35.CS-CS.2.2: Describe how computational thinking can be used to solve real life issues in science and engineering.

SC.68.CS-CC.1.2: Apply productivity and or multimedia tools for local and global group collaboration.

SC.68.CS-CS.6.2: Describe how humans and machines interact to accomplish tasks that cannot be accomplished by either alone.

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*3-D printing immerses students in hands-on inquiry and open-ended exploration."*

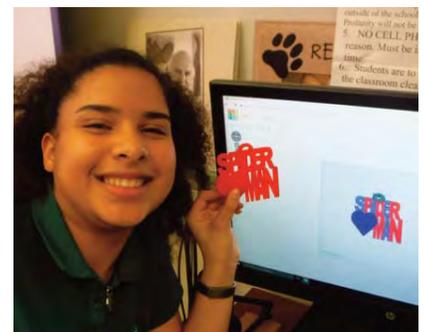
## STUDENTS

This project was conducted with middle school students, working in collaborative groups with hands-on 3-D activities.

## MATERIALS & RESOURCES

Materials include a 3-D printer (depending on model, a computer may be needed), filament, open counter space, software (free) for designing, and software (free) tutorials.

Resources include Internet (software is Internet-based); Library can be used to create a 'Maker Space.'



## ABOUT THE TEACHER

Suzanne Banas is a National Board Certified teacher, with a Ph.D. in Science Curriculum/Educational Leadership. For 25 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). Dr. Banas' recent honors include the 2016 State Winner EdSurge Fifty States Project and the 2017 Top Finalist for the Teacher Hall of Fame.



### CONTACT INFORMATION MAYRA BRODY

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**PRINCIPAL:** Mary Ann Alonso

**EMAIL:** mbrody4@dadeschools.net

**PHONE:** 305.274.2735

**DOWNLOAD PROJECT INFO:** <http://bit.ly/2ilhAB9>

# “Cracking” Science Cycles to “STEM” Environmental Impact

Students explore the ever-changing environment and how it affects the future of nature and animals

The ultimate investigation of animal life cycles is realized through the use of a chick incubator and scope. Students observe and document how chicken eggs evolve from embryos to baby chicks. Students quickly learn that this man-made process of incubation does not guarantee successful hatching of all eggs through the entire cycle. With increased understanding of how easily the balance of nature can be affected, students further their research to investigate how a changing environment can affect animal species to the extreme of becoming endangered or extinct. Using collaboration and higher order thinking skills, they develop a STEM project that identifies environmental problems affecting animals and possible solutions to these problems.



“ Learning about how baby chicks develop has made the students so enthusiastic about the ‘circle of life.’ ”

### STUDENTS

Participating students ranged from regular levels to gifted, 4th-5th grade (about 60 students). This project can be adapted from K-6th grade and used with small or large groups. It can meet daily, as we did, or it can be a once a week project as the incubation period is 21 days. Parents could donate the eggs to incubate and help with care and feeding after they are born.

### MATERIALS & RESOURCES

Materials needed include an incubator (self-turning, if possible), a table for the incubator, computers to research animals (endangered and extinct), a “chick diary” for documentation, books on egg cycles as well as books on animals that do not hatch from eggs, the webquest for the culminating STEM activity (provided), and *The Hoboken Chicken Emergency* (fiction, with included activities).



### ABOUT THE TEACHER

Mayra Brody been teaching for 28 years, with the last 10 years being an instructor for gifted students. She has received both Adapter and Innovator grants from The Education Fund and in 2012, received an \$8,000 grant for her school’s Science Lab.

### FLORIDA STANDARDS

#### SCIENCE

SC.2.L.16.1: Observe and describe major stages in the life cycles of plants and animals, including beans and butterflies.

SC.35.CS-CC.1.2: Describe key ideas and details while working individually or collaboratively using digital tools and media-rich resources in a way that informs, persuades, and/or entertains.

SC.35.CS-PC.2.7: Identify and describe how computing knowledge is essential to performing important tasks and functions.

SC.4.L.17.4: Recognize ways plants and animals, including humans, can impact the environment.

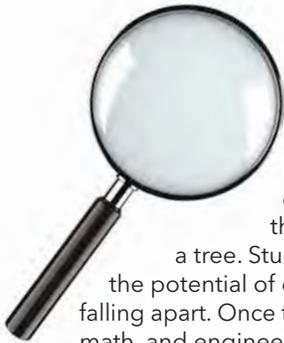
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# Engineering is **Elementary** My Dear Watson!

Using inquiry and a project-based approach increases students' learning experiences in science and engineering



The concept of engineering isn't exclusive to operating a freight or passenger train - so students learn, in this project-based STEM lesson that focuses on the engineering design process. Through reading a story that guides the reader to solving a real-life problem encountered by the story's characters, students use science inquiry tactics to meet an engineering design challenge. In one project, they reflect on the story about a boy who designs a parachute to get fruit out of a tree. Students then design and build their own parachute that will have the potential of carrying heavy cargo that lands safely on the ground without falling apart. Once the parachute is tested, students see how the link among science, math, and engineering comes into play as they revisit their design and reevaluate areas for improvement. They also make the connection of the importance of such a device when natural or man-made disasters occur. And food, perishables, and medicine must be delivered in remote areas.



## **CONTACT INFORMATION** **NAVIA GOMEZ**

**SCHOOL:** Dante B. Fascell Elementary

**PRINCIPAL:** Margaret D. Ferrarone

**EMAIL:** 237245@dadeschools.net

**PHONE:** 305.380.1901

**DOWNLOAD PROJECT INFO:** <http://bit.ly/2uZ4Xl0>

## **FLORIDA STANDARDS**

### **SCIENCE**

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, analyze information, make predictions, and defend conclusions.

SC.5.N.1.3: Recognize and explain the need for repeated experimental trials.

SC.35.CS-CC.1.3: Identify ways that technology can foster teamwork, and collaboration can support problem solving and innovation.

SC.35.CS-CS.2.4: Solve real-world problems in science and engineering using computational thinking skills.

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*Giving my students the opportunity to figure things out enables them to work like real engineers."*

## **STUDENTS**

Students from grades K-5 can participate in this project and can be of varying exceptionalities, learning abilities, and ESOL levels. This project would also be great to implement in an after school care program to enhance the area of Reading and STEM across the curriculum.

## **MATERIALS & RESOURCES**

Materials include story books and teacher guides (purchased on the Engineering is Elementary (or EiE) website), "building" materials for activities, "Technology in a Bag" from the EiE series, and handouts/worksheets (provided). Resources include Internet for EiE website; school library can also serve as a great resource if they include a bibliography that consists of stories where "characters have to solve a problem" (i.e. The Three Little Pigs); a field trip can be planned to the new Frost Museum which include STEM related areas; parents or institutions that can donate basic classroom consumables.



## **ABOUT THE TEACHER**

Navia Gomez has been teaching for 18 years and has received various awards and grants such as the Science Teacher of the Year through the Dade County Science Teachers Association, 2017 Teacher of the Year at Dante B. Fascell Elementary, the Spirit of Service Learning Award (Peace Corps and Teachers Coalition) in 2016, and a grant to create a "Eco-Hub - Back Lab" so students, faculty and parents can meet to collaborate and share ideas on sustaining natural resources.



## CONTACT INFORMATION LISA HAUSER

SCHOOL: iPreparatory Academy

PRINCIPAL: Alberto M. Carvalho

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PHONE: 305.995.1928

DOWNLOAD PROJECT INFO: <http://bit.ly/2x6CkzX>

# It's a Crazy Chain!

Inspired by Rube Goldberg's cartoons from the early 1900s, students build chain reaction machines to accomplish a relatively simple task

The innovation process is showcased at its best in this project inspired by Rube Goldberg's Pulitzer Prize winning cartoons that feature multi-step mechanical contraptions designed to accomplish a simple task. After reviewing the types of simple machines (lever, pulley, wedge, etc.), teams of students choose the task that their machine will accomplish and brainstorm possible compound machines that would achieve the task with a minimum of three steps. A sketch of the machine is presented to the teacher and once a discussion is completed about the feasibility of each step, students begin building, testing, and fine-tuning their machine until it successfully completes the task. Upon completing a video narrative, highlighting their favorite aspect of their machine, plus recording a video of the completed machine, students present their machines in action to the entire class.



“ Students build confidence through creative and critical problem solving, perseverance and collaboration.”

## STUDENTS

This project was completed with approximately 70 5th grade students, representing a variety of learning levels. Completion times varied between three and four hours, overall, during varying periods. This project is suitable for students of all achievement levels, and can be implemented from 3rd-12th grade and be adapted to meet the needs of the classroom.

## MATERIALS & RESOURCES

Materials and environment for this project will always vary. Students brought toys and recyclables from home (cars, dominos, toilet paper rolls, thread spools, boxes, etc.) and the teacher provided tape, string, paper and books (to make inclined plane). One setup was a standard classroom with desks combined to make larger work surfaces, while other setups included large lab tables and moving desks away to just use the floor. Students used devices to make their videos. Resources include the Internet to access the Rube Goldberg website and make paper copies for students to study; parents volunteer their time to assist with the project.



## FLORIDA STANDARDS

### SCIENCE

SC.35.CS-CC.1.1: Identify technology tools for individual and collaborative data collection, writing, communication, and publishing activities.

SC.35.CS-CS.2.4: Solve real-world problems in science and engineering using computational thinking skills.

SC.5.P.10.2: Investigate and explain that energy has the ability to cause motion or create change.

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.13.3: Investigate and describe that the more mass an object has, the less effect a given force will have on the object's motion.

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## ABOUT THE TEACHER

Lisa Hauser has been a public school math teacher since 2001 and was the Central Region Teacher of the Year and a District Finalist for Teacher of the Year in 2015. As a champion of women and minorities in STEM fields, she helped found CodeArt Miami with the mission of inspiring girls to code through the arts. She has been tasked with developing a Makerspace at her school to build innovation capacity among younger students.

# Makey Makey **Makerspace**

Makey Makey circuit boards promote critical thinking and creativity while teaching students about electronics and computer science



Want to increase STEM activity and excitement in your classroom? Try Makey Makey circuit boards! With this technology, an ordinary classroom becomes a Makerspace where critical thinking and creativity thrive while teaching students about circuits, electronics, and computer science. In one project, students use conductive materials and the Makey Makey boards to redesign video game controllers and to find new ways to play classic games. Students then put on a Maker Fair where they share their ideas. In another project, students make music by using Scratch to write small programs that allow the Makey Makey boards to turn a bunch of bananas into a piano keyboard. Because the Makey Makey boards are reusable, many opportunities for varying projects abound, allowing for the most diverse set of students to buy-in and engage in STEM.



## CONTACT INFORMATION DALE ADAMSON

**SCHOOL:** Howard D. McMillan Middle School

**PRINCIPAL:** Hilca Thomas

**EMAIL:** adamson@dadeschools.net

**PHONE:** 305.385.6877

**DOWNLOAD PROJECT INFO:** <http://bit.ly/2xIKsvF>

## FLORIDA STANDARDS

### SCIENCE

SC.5.P.11.1: Investigate and illustrate the fact that the flow of electricity requires a closed circuit (a complete loop).

SC.68.CS-CC.1.3: Design, develop, and publish a collaborative digital product using a variety of digital tools and media-rich resources that demonstrate and communicate concepts to inform, persuade, and/or entertain.

SC.68.CS-CS.6.2: Describe how humans and machines interact to accomplish tasks that cannot be accomplished by either alone.

SC.68.CS-CS.6.6: Design and demonstrate the use of a device (e.g., robot, e-textile) to accomplish a task, individually and collaboratively.

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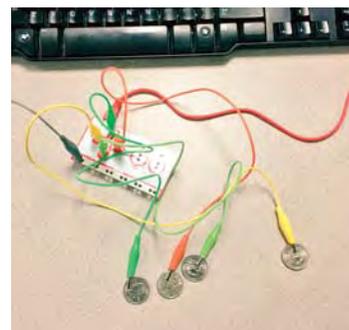


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“ Giving students the opportunity to engage in hands-on learning and problem-solving is critical to developing well-rounded students.”

## STUDENTS

This project was conducted with classes of 20-25 8th grade students, working for approximately three hours of classroom time. The project can be modified to meet the needs of a diverse group of students (both by age and ability). Each board can accommodate 3-4 students. Final work products and follow-up activities can be modified to meet the needs of a variety of students.



## MATERIALS & RESOURCES

The materials needed are Makey Makey circuit boards; and conductive materials (metal, foil, fruit, cups of water, plants, and other conductive items). Resources include the Internet to plug the Makey Makey circuit boards into computers and access the Scratch website.

## ABOUT THE TEACHER

Dale Adamson has been teaching math and STEM Research for five years at his current school and serves as the 8th grade team leader. He has been recognized by the State of Florida three years in a row as a High Impact Teacher and was a region finalist for Rookie Teacher of the Year. He received his Master's degree in STEM Education from Adams State University, including a STEM Research Distinction from Columbia University for Action Research. He has been a recipient of multiple Adaptor Grants from The Education Fund. In terms of this project, he has been doing this for the past two semesters with great success and no additional personnel are needed to complete the unit.



## CONTACT INFORMATION LOGAN JOHNSON

**SCHOOL:** Mater Academy Charter High School

**PRINCIPAL:** Judith Marty

**EMAIL:** ljohnson@materacademy.com

**PHONE:** 305.828.1886

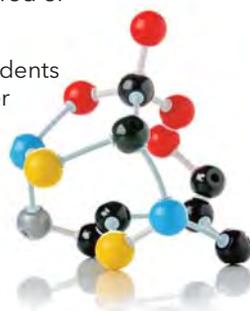
**DOWNLOAD PROJECT INFO:** <http://bit.ly/2v7QDTv>

# Molecules That Shaped History

Students gain a new perspective on how chemistry has shaped our world during an interdisciplinary study that fuses chemistry with history

Students often want to know how and why what they have learned is connected with the world around them. In this course of study, new insight comes to the forefront as students read *Napoleon's Buttons: Seventeen Molecules that Changed History*. Students focus on one chapter that is the inspiration for a three-four page research paper on two molecules in that given topic - one that has had an impact on humanity, and one that is newly discovered or found to be important.

After completing the necessary research about their topic, students present their molecules in a visually intriguing manner to other chemistry students. Culminating activities incorporated into the unit include two labs featuring molecules from the book. Both will help students incorporate advanced chemistry topics while they are reading about the historical significance of the particular molecule.



“Incorporating science and math into a historical perspective encourages students to appreciate and possibly gain a passion for a new subject.”

## STUDENTS

This project was developed as a year-end AP Chemistry project. The students are second year chemistry students ranging from 10-12th grade. Students attended class on appropriate days during block scheduling and worked on the project on their own time. This project could be adapted for first year chemistry students over a longer period of time allowing them to read the book in its entirety. For learners of varying abilities, the students can work in partners. The research paper can be altered to fit the needs of the students.



## MATERIALS & RESOURCES

Lab materials include fumehood for the Aspirin Lab (Flinn Scientific, \$29) and Nylon Synthesis demonstration (Flinn Scientific, \$53) - both have materials for one class; milligram balance; calculators; hot plates; and *Napoleon's Buttons: Seventeen Molecules that Changed History* (Amazon, \$9.98). Resources include the media center with access to Google Scholar or other journal database and computers with Internet access.

## ABOUT THE TEACHER

Logan Johnson is a third year chemistry teacher with two years of AP Chemistry experience. In 2016-17, she was selected as a Disseminator and was also a recipient of an Innovator Grant from The Education Fund.

## FLORIDA STANDARDS

### ENGLISH LANGUAGE ARTS

LAFS.1112.RST.1.1: Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account.

LAFS.1112.RST.1.3: Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.

### SCIENCE

SC.912.P.8.7: Interpret formula representations of molecules and compounds in terms of composition and structure.

SC.912.P.12.12: Explain how various factors, such as concentration, temperature, and presence of a catalyst affect the rate of a chemical reaction.

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# Using **Blackberries** to Create a Solar Cell

Students apply engineering concepts to create a device able to generate electricity



Due to the downward trend of depleting nonrenewable energy sources, there is an urgent demand to create alternative ways to produce energy. This interactive, hands-on lesson places students in an engineering driver's seat where they learn to use the dye from blackberries to create a device that can convert light/solar energy into electric energy. Once the solar device is developed, they use a multimeter to calculate its photovoltaic output. This begins to solicit an understanding of what it would take to apply these engineering concepts on a much larger scale in a variety of areas. It also gives students the opportunity to glean insight as to what some engineers do and how these effects can be useful in helping to minimize the future costs, both environmentally and monetarily, associated with the use of energy.



## CONTACT INFORMATION TONGALA LYNN

**SCHOOL:** Norland Middle School

**PRINCIPAL:** Ronald G. Redmon

**EMAIL:** [tlynn1@dadeschools.net](mailto:tlynn1@dadeschools.net)

**PHONE:** 305.653.1210

**DOWNLOAD PROJECT INFO:** <http://bit.ly/2v8lgbj>

## FLORIDA STANDARDS

### SCIENCE

SC.35.CS-CS.2.4: Solve real-world problems in science and engineering using computational thinking skills.

SC.68.CS-CS.2.2: Solve real-life issues in science and engineering (i.e., generalize a solution to open-ended problems) using computational thinking skills.

### ENGLISH LANGUAGE ARTS

LAFS.1112.RST.1.3: Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.

LAFS.68.RST.3.9: Compare and contrast the information gained from experiments, simulations, video, or multimedia sources with that gained from reading a text on the same topic.

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*This lesson allows students to engage in an innovative project by using blackberries as a means to generate solar energy."*

## STUDENTS

Twenty-four 6th and 7th grade students participated in this project, meeting two to three times for completion of activities. It can be used in the traditional and gifted/advanced classroom or adapted to use with other age groups and achievement levels, as well as small and large groups.

## MATERIALS & RESOURCES

Materials include conductive glass (2), titanium dioxide paste, isopropanol, multimeter, chem wipes, alligator clips (2), binding clips (2), hot plate, electrolyte solution, pencils, dropper, beaker, tape, aluminum foil, tweezers, stirring rod, stop watch, and water (5ml).

Note: To complete this lab activity, teachers can order the Dye Sensitized Solar Cell Kit, Product #P6-2150 from [www.arborsci.com/](http://www.arborsci.com/) for approximately \$140 (not including shipping and handling costs). The kit comes with all the materials needed to complete this activity.

## ABOUT THE TEACHER

Tongala Lynn has been teaching for approximately 17 years. She has been successful in working as an educational specialist where she received grants to assist students in high-risk, low-income areas. She developed this project last year, and at present, is still making changes and adjustments as needed so that it can be duplicated by other teachers to facilitate learning and enhance STEM in classrooms.





## CONTACT INFORMATION ADAM MACK

**SCHOOL:** W.R. Thomas Middle School

**PRINCIPAL:** Allen N. Breeding III

**EMAIL:** adammack@dadeschools.net

**PHONE:** 305.995.3800

**DOWNLOAD PROJECT INFO:** <http://bit.ly/2ilaFYI>



# Come Fly With Me!

Students explore the physics of flight using drone technology

Up, up, and away! With the likelihood that many of today's students will encounter the use of drones at some point in their future careers, they are introduced to the physics of flight by infusing engineering with concepts of design modification throughout the learning process. Once their drones are designed and built, students will need to code the flight controls to work with their individual remotes and then expand on their current engineering design and improve on the base model. A sub-unit on electronics and mechanical engineering is included with the project in a format that will benefit them when exploring aerospace technologies later on. After learning these principles and concepts, students are offered the opportunity to examine ways in which this technology can be applied in their surrounding communities to enhance their world.



*Through this engaging, hands-on approach, students learn different career opportunities that are found in our advancing technological world."*

## STUDENTS

A total of 75 students in grades 6-8th worked with the drones and learned about this technology. Although used in a middle school setting, this project can also be used at the elementary or high school level since it applies to the Physical Science strands taught in all grades and levels of complexity. Teachers have the flexibility to work with smaller groups or larger depending on their class structures.



## MATERIALS & RESOURCES

Materials include AutoDesk Inventor (a 3D modeling program) to design new parts and 3D printer using their Makerbot Replicator to assist in the competitions; and PVC materials and foam were used for the obstacle course. Teachers will be provided with the schematics to help them get started. Resources include the annual SECMA and TSA competitions for students to show off their new skills; high school students came in to serve as mentors to younger students; two local companies, Bots For All and Kellstrom Aerospace visited the classroom, exposing students to technology and engineering career possibilities.

## ABOUT THE TEACHER

Adam Mack has been teaching science and technology since 2007, after graduating with a degree in Special Education. In 2015, he received a grant that allowed him to fully fund a robotics program in his school. He organized the first ever middle school state qualifying competition for M-DCPS, bringing public and private school students with diverse backgrounds from multiple counties across South Florida. Currently, Mr. Mack teaches Computer Technology Education and has created a Makerspace program for his students that includes student AutoDesk 3D printing certification. He was honored to take W. R. Thomas' rookie robotics team to the State Robotics Competition where they completed their final round before being eliminated.

## FLORIDA STANDARDS

### SCIENCE

SC.6.N.1.1: Define a problem from the curriculum, use appropriate reference materials to support scientific understanding, plan and carry out scientific investigation of various types, such as systematic observations or experiments, identify variables, collect and organize data, interpret data in charts, tables, and graphics, analyze information, make predictions, and defend conclusions.

SC.6.P.13.2: Explore the Law of Gravity by recognizing that every object exerts gravitational force on every other object and that the force depends on how much mass the objects have and how far apart they are.

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

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# Become a **Robotics** Expert Easily

Students experience increased interest in school and learning through robotics and basic electronics circuitry

Trying to get into robotics with very little knowledge of electronics and coding makes it difficult for a teacher and students who desire to learn. But with the SparkFun Inventor's Basic Kit for RedBot, students will be knee-deep in circuits in no time at all as the kit includes all materials to complete nine circuit boards that teach them how to drive their RedBots, have them follow lines, and control them remotely.

An online tutorial contains step-by-step instructions of how to connect each circuit and assemble the kit into a full-fledged robot with all of the parts. Once students master each experiment, they can take their knowledge and apply it towards creating their own robot platform.



## **CONTACT INFORMATION** **DR. SUZANNE BANAS**

**SCHOOL:** South Miami Middle Community School

**PRINCIPAL:** Fabiola V. Izaguirre

**EMAIL:** sbanas@dadeschools.net

**PHONE:** 305.661.3481

**DOWNLOAD PROJECT INFO:** <http://bit.ly/2v7Qf7d>

**“** *It is a great way to get your feet wet in the world of robotics.”*

## **STUDENTS**

This project was done with four 8th grade Physical Science classes using one kit through demonstration of basic electronics, circuitry, and robotic coding. It can be appropriate for upper elementary students through a gifted program or small club situation. Secondary students appear to be able to read and follow the directions in the guide.

## **MATERIALS & RESOURCES**

Sparkfun kits include all the basic materials needed as well as their online support and guides. Individual pieces are also available to create your own electronics or to improve further projects. Resources include the Internet and SparkFun website.



## **ABOUT THE TEACHER**

Suzanne Banas is a National Board Certified teacher, with a Ph.D. in Science Curriculum/Educational Leadership. For 25 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). Dr. Banas’ recent honors include the 2016 State Winner EdSurge Fifty States Project and the 2017 Top Finalist for the Teacher Hall of Fame.

## **FLORIDA STANDARDS**

### **SCIENCE**

SC.5.P.11.1: Investigate and illustrate the fact that the flow of electricity requires a closed circuit (a complete loop).

SC.912.CS-CP.1.3: Analyze and manipulate data collected by a variety of data collection techniques to support a hypothesis.

SC.912.CS-CP.1.4: Collect real-time data from sources such as simulations, scientific and robotic sensors, and device emulators, using this data to formulate strategies or algorithms to solve advanced problems.

SC.912.CS-CS.6.4: Explain the notion of intelligent behavior through computer modeling and robotics.

SC.912.CS-CS.6.7: Describe major applications of artificial intelligence and robotics.

## **SPONSORED BY**



# STEM Squad:

## Starting a Robotics Club at Your School

Through VEX IQ, students are introduced to the world of robotics with enticing and engaging hands-on activities



More and more, robotics are capturing the fascination and imagination of students. One way to keep students' interests piqued is to coordinate an after school robotics club, such as the STEM Squad. For students just beginning to take an interest in robotics, the STEM Squad offers VEX IQ as an excellent introduction. It encourages the engineering design process and how students' solutions will work with VEX plans. Before a robot is built, students learn about competition and create a prototype to meet competition qualifications. Students then compare and contrast their model with the proposed model from VEX IQ. The STEM Squad coordinator encourages students to modify their robot and use the competition board to find ways to improve their performance in the competition task. Once their robots are completed, students are then able to compete in a VEX IQ competition and move on to more diversified levels of robotics.



### CONTACT INFORMATION DALE ADAMSON

**SCHOOL:** Howard D. McMillan Middle School

**PRINCIPAL:** Hilca Thomas

**EMAIL:** adamson@dadeschools.net

**PHONE:** 305.385.6877

**DOWNLOAD PROJECT INFO:** <http://bit.ly/2ikqEpE>

### FLORIDA STANDARDS

#### SCIENCE

SC.35.CS-CS.6.3: Explain that computers model intelligent behavior (as found in robotics, speech and language recognition, and computer animation).

SC.912.CS-CS.6.4: Explain the notion of intelligent behavior through computer modeling and robotics.

SC.912.CS-CS.6.7: Describe major applications of artificial intelligence and robotics, including, but not limited to, the medical, space, and automotive fields.

SC.912.CS-CP.1.4: Collect real-time data from sources such as simulations, scientific and robotic sensors, and device emulators, using this data to formulate strategies or algorithms to solve advanced problems.

#### SPONSORED BY



“Robotics and STEM are the future for jobs in the world.”

### STUDENTS

This project was completed by a small group of six students within the STEM Squad club. The students were 7th and 8th graders and generally high achievers. This project could be easily adapted for students grades 3-8 of various achievement levels.

### MATERIALS & RESOURCES

Materials include VEX IQ kits, a large work table for students to gather around, and a 10ft x 10ft floor space for the competition field to be set up for students to use the robot. The curriculum packet will include introductory engineering activities and a guide to using VEX IQ with students. Resources include working with PTSA, EESAC, and the school principal to get additional robotics kits, but the Adaptor Grant is enough to get everyone started on their journey towards building a robotics club.



### ABOUT THE TEACHER

Dale Adamson has been teaching math and STEM Research for five years at his current school and serves as the 8th grade team leader. He has been recognized by the State of Florida three years in a row as a High Impact Teacher and was a region finalist for Rookie Teacher of the Year. He received his Master's degree in STEM Education from Adams State University, including a STEM Research Distinction from Columbia University for Action Research. He has been a recipient of multiple Adaptor Grants from The Education Fund.



## CONTACT INFORMATION ANIKE SAKARIYAWO

**SCHOOL:** Miami Norland Senior High

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**PHONE:** 305.653.1416

**DOWNLOAD PROJECT INFO:** <http://bit.ly/2vThbuw>

# Engineering Design Process

Through innovation, students become problem-solvers and producers

The goal of this project is to help students become innovative thinkers and problem solvers as it relates to coding, robotics, or developing a new process or system. The Engineering Design Process introduces five focus areas as students work together in groups of five to design a catapult using a VEX Robotics kit to launch objects at a target. The five areas are: 1) Ask: questions about the design - who, what, when, how; 2) Imagine: Brainstorm ideas; 3) Plan: Pitch the design, answering why someone would want to use it; 4) Create: Model, video, blueprint, PowerPoint; and 5) Improve: Analyze results - what worked, what didn't, how could it be done differently. Through this detailed process, students with different learning styles not only attain academic success, they also achieve higher self-esteem, increase their vocabulary, and learn volumes through discovery and inquiry.



“The Engineering Design Process enables learners to attain academic success.”

## STUDENTS

Fifteen students from Miami Norland's first Robotics Club, the NorlandBots, participated. They met every other day with their partners for three weeks to complete their projects.

## MATERIALS & RESOURCES

Materials include a large space for 25 students to move freely about, 5 VEX engineer notebooks, 5 Hexbug Kids VEX Robot Catapults, 3 Corn Hole targets, masking tape, pencils, and camera.

Possible resources include the school media center for research, presentations, and collaborative learning groups; Museum of Science for students to make an observation of something they can create and or improve using the engineering cycle; community involvement contributions/sponsorship can allow teachers to continue this effort in and out of the classroom.

## ABOUT THE TEACHER

Anike Sakariyawo has nearly 15 years of teaching experience and is the lead teacher in general and honors physical science at her school. She is a Norland Robotics Club sponsor and was named Teacher of the Year in 2016-17. She has won numerous grants through The Education Fund, Project Rise, and Dwayne Wade's World Foundation. Ms. Sakariyawo is also the President/ CEO of SEEK Foundation, Inc., a nonprofit organization that empowers members of the community in an effort to protect lives and discover diverse educational programs that promote problem-solvers beyond the classroom.



## FLORIDA STANDARDS

### SCIENCE

SC.68.CS-CC.1.2: Apply productivity and or multimedia tools for local and global group collaboration.

SC.68.CS-CS.2.2: Solve real-life issues in science and engineering (i.e., generalize a solution to open-ended problems) using computational thinking skills.

SC.912.CS-CP.3.1: Create a computational artifact, individually and collaboratively, followed by reflection, analysis, and iteration (e.g., data-set analysis program for science and engineering fair, capstone project that includes a program, term research project based on program data).

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# Surviving a **Zombie** Apocalypse

Students apply the basic laws of economics as they navigate through the world of the undead



Could you survive an apocalyptic environment filled with zombies? High school students have learned to do just that in this lesson on economics based on an adaptation of the classic simulation, "Capsized Canoe." Instead of surviving with limited resources on a remote Alaskan island, students are thrown into a world of the undead where they take shelter in a weathered construction shed with only some basic supplies. Applying the basic economic questions of what to produce, how to produce, and for whom to produce, students must work in teams to problem-solve, using whatever resources are available to manufacture what they need for protecting their shelter and obtaining supplies for survival. Their actions and strategies are

evaluated by the teacher throughout the lesson, and they are given feedback on their progress until they are rescued. This peer and student-teacher interaction encourages students to creatively apply the basic laws of economics in a way that makes them vital and more memorable.



## **CONTACT INFORMATION** **DR. KEITH ASTUTO**

**SCHOOL:** TERRA Environmental Research Institute

**PRINCIPAL:** Jose Luis Sirven

**EMAIL:** [kastuto@dadeschools.net](mailto:kastuto@dadeschools.net)

**PHONE:** 305.412.5800

**DOWNLOAD PROJECT INFO:** <http://bit.ly/2v8mH9y>

## **FLORIDA STANDARDS**

### **SOCIAL STUDIES**

SS.912.E.2.1: Identify and explain broad economic goals.

SS.912.E.1.3: Compare how the various economic systems (traditional, market, command, mixed) answer the questions: (1) What to produce?; (2) How to produce?; and (3) For whom to produce?

### **SCIENCE**

SC.912.CS-CC.1.2: Select appropriate tools within a project environment to communicate with project team members.

SC.912.N.1.1: Define a problem based on a specific body of knowledge.

SC.912.N.4.2: Weigh the merits of alternative strategies for solving a specific societal problem by comparing a number of different costs and benefits, such as human, economic, and environmental.

## **SPONSORED BY**



*This project encourages students to creatively apply the basic laws of economics that makes the laws vital and memorable."*

## **STUDENTS**

This lesson was presented to 150 high school seniors, with class size ranging from 25-33. Due to teacher-student interaction, it is recommended that large classes be at the upper end of the recommended group size. All levels of achievement from remedial to AP/IB can be included and it can be used in survey economics courses as well as microeconomics or macroeconomics.



## **MATERIALS & RESOURCES**

Materials include a projection system to show the initial PowerPoint to introduce the activity to the class and to display blow-ups of the forms students use in the exercise. A lesson plan, PowerPoint presentation, student team forms/maps/guides, and a teacher's guide to evaluating the moves made by the teams within the simulation were prepared.

## **ABOUT THE TEACHER**

Dr. Keith Astuto is entering his 14th year of teaching in Miami-Dade. He was a founding member of the FIU Program in National Security Studies Advisory Board. Dr. Astuto is the only two-time winner of the Federal Reserve Bank of Atlanta's Lesson Plan of the Year competition. He is a multiple award-winner at the annual Governor's Awards from the Florida Council on Economic Education, and he has been recognized by the Miami-Dade Council for Social Studies as the current Social Studies Teacher of the Year.



### CONTACT INFORMATION KATIE PRELAZ

**SCHOOL:** Southside Elementary  
Museums Magnet School

**PRINCIPAL:** Salavatore Schiavone

**EMAIL:** kprelaz@dadeschools.net

**PHONE:** 305.371.3311

**DOWNLOAD PROJECT INFO:** <http://bit.ly/2wr0AxR>

# Bonnets and Bandanas: Settler Trading Post Economics

By studying and recreating an early Miami trading post, students learn about essential economic concepts

Can you imagine downtown Miami as one hut on the mouth of the Miami River? The early history of Miami comes alive for students as they create an active trading post in their classroom where washboards, bonnets, quilts, tools, and bandanas take them on a trip back to the 1800's.

Through the process of setting up the trading post, that includes creating replicas of items from that era, plus negotiating, bartering, and deciding on survival needs, students learn about needs, wants, producers, consumers, supply, and demand – all concepts critical to having a strong foundation to understand our economy. This lesson allows them to expand their vocabulary, as evident by their journaling, and makes them aware that as consumers, many choices are available to them in our market system.



*“The students have become aware of choices in our markets and what they can do as consumers.”*

### STUDENTS

This project was used with 15 Gifted second graders and completed over a two-week period during Social Studies. They needed assistance with online research and guidance with the assembly of the objects for the trading post. Older students can research international trade concepts, and younger students can make charts of needs and wants and likes and dislikes. There was high interest in the activity when set in a historical context with bonnets and bandanas worn during the lessons.



### MATERIALS & RESOURCES

Materials are teacher and/or student made with construction paper. Documents and photographs come from various sources, researched on the Internet. The project includes worksheets and images to be reproduced or presented on a smart board. If a field trip is used, History Miami has a pioneer settlement that supplies additional artifacts during the visit. Resources include the Internet, class library, and research books about early Miami.

### ABOUT THE TEACHER

Katie Prelaz has been teaching for more than 20 years, from first grade to adult ESOL classes, with the past 10 years at a museums magnet school. She has been recognized by History Miami and the Florida Council for the Social Studies as a Teacher of the Year. She has received a Florida Council on Economic Education Governor's Award and been a region finalist for Teacher of the Year twice. She has been a recipient of Adapter grants, and has presented as a Disseminator teacher (Ancient Egypt in Modern Miami).

### FLORIDA STANDARDS

#### SOCIAL STUDIES

SS.2.E.1.1: Recognize that people make choices because of limited resources.

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

SS.2.E.1.3: Recognize that the United States trades with other nations to exchange goods and services.

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

#### ENGLISH LANGUAGE ARTS

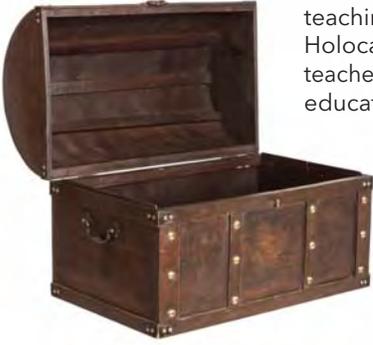
LAFS.K.12.W.3.7: Conduct short as well as more sustained research projects based on focused questions, demonstrating understanding of the subject under investigation.

### SPONSORED BY



# Teaching Trunks on the Holocaust

The Florida Holocaust Museum in St. Petersburg provides free literature-based teaching trunks



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 curriculum focuses 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.



## CONTACT INFORMATION ESTHER STERENTAL

**SCHOOL:** Coral Reef Senior High

**PRINCIPAL:** Thomas Ennis

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

**PHONE:** 305.232.2044

**DOWNLOAD PROJECT INFO:** [educationfund.org](http://educationfund.org)

## 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.

For more information, go to  
[flholocaustmuseum.org](http://flholocaustmuseum.org)



Teaching Trunks ensure that the important lessons of the Holocaust are not forgotten and will be passed from generation to generation."

## ABOUT THE TEACHER

Esther Sterental is a graduate of the Yad Vashem Holocaust Education Teacher Training Program in Jerusalem. In 2012, Ms. Sterental 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.

## ADDITIONAL RESOURCES

### Dr. Miriam Klein Kassenoff

M-DCPS Education Specialist, Holocaust Education Director, UM Holocaust Studies Institute Education Chairperson, The Holocaust Memorial  
[mkassenoff@dadeschools.net](mailto:mkassenoff@dadeschools.net) or 305.995.1201

Dr. Kassenoff is a child survivor of the Holocaust having escaped Nazi Europe in 1941. She 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.

SPONSORED BY

**The Jack Chester  
Foundation**



## CONTACT INFORMATION SUSAN ROSENTHAL

**SCHOOL:** Cyprus K-8 Center

**PRINCIPAL:** Eduardo L. Alonso

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**PHONE:** 305.271.1611

**DOWNLOAD PROJECT INFO:** <http://bit.ly/2v874iC>

# Bystanders No More!

Holocaust Education is presented in a meaningful context, eliciting sensitivity and empathy

In an effort to develop empathy among students towards the German-Jewish people who suffered atrocities of the Holocaust during WWII, Holocaust education is presented in a meaningful context, eliciting sensitivity and the desire to prevent anything like this from happening again. This year-long project takes students, step-by-step each month, through an in-depth study of Germany before, during, and after WWII, showcasing all the political aspects that led to discontent among its people and the eventual leadership of Adolf Hitler. Students analyze how the German people felt, and identify with the Germans' loyalty for their country. They read about the German society through WWII, engage in literature circle discussions, and reflect on other genocides that have occurred around the world. Culminating the study, a Holocaust Survivor speaks with the students, giving them a real sense of the hardships through his testimony.



**“** Empathy is not something that can be learned easily – rather, it needs to develop over time.”

## STUDENTS

There were 55 5th grade students who participated in the project, ranging in ESOL levels of 1-4 and included in a population of ESE students and general education. This project can be adapted to any grade level and it is the hope that it will be available from K-8 grade using different resources for age appropriate activities.



## MATERIALS & RESOURCES

Materials include a SmartBoard and Holocaust Teaching Trunk (on loan from M-DCPS). The following books are encouraged: *Number the Stars*, *Daniel's Story* (with parental consent), *Behind the Bedroom Wall*, *Esperanza Rising*, and *A Knock at the Door*. Films include *The Promise* and *Woman in Gold*. Resources include The Holocaust Memorial Service (late April on PBS); Holocaust Memorial (Miami Beach) for information and possibly a field trip; inviting a Holocaust Survivor speaker in May, the Internet for the iWitness program (collaborative learning and activities).

## ABOUT THE TEACHER

Susan Rosenthal is presently a retired teacher but has been rehired by M-DCPS as a reading interventionist. She has received two Adaptor grants and two Disseminator grants from The Education Fund. This project has been conducted after completing a one year adaptor grant with it and expanding it for the whole year in 5th grade. This is done in conjunction with the 5th grade homeroom teacher at Cypress K-8 Center.

## FLORIDA STANDARDS

### SOCIAL STUDIES

SS.5.A.1.1: Use primary and secondary sources to understand history.

SS.5.A.1.2: Utilize timelines to identify and discuss American History time periods.

SS.5.C.3.2: Explain how popular sovereignty, rule of law, separation of powers, checks and balances, federalism, and individual rights limit the powers of the federal government as expressed in the Constitution and Bill of Rights.

### ENGLISH LANGUAGE ARTS

LAFS.5.W.1.2: Write informative/explanatory texts to examine a topic and convey ideas and information clearly.

LAFS.68.WHST.2.5: With some guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.

## SPONSORED BY

**Robert Russell  
Memorial Foundation**

# Taking Advantage of **Technology** - At Any Level!

Technology in the classroom helps students become tech-savvy and apply the skills learned to other courses



Technology in the classroom can work - really! This project is designed to help teachers realize that technology can work in any classroom, regardless of circumstance. As long as students have a device like a computer, tablet, or cell phone on a consistent basis, test scores and class grades have a great chance of improving. Several examples of resources are provided for categories like engagement and information sharing, real-world application, self-directed learning, remediation and review, and fun and games. In this project, you will learn how to implement technology in your classroom and hear about many resources you can use for any purpose you desire!



## **CONTACT INFORMATION** **HADASSA LEVENSON**

**SCHOOL:** Miami Beach Senior High School

**PRINCIPAL:** Dr. Maria T. Rodriguez

**EMAIL:** [hlevenson@dadeschools.net](mailto:hlevenson@dadeschools.net)

**PHONE:** 305.532.4515

**DOWNLOAD PROJECT INFO:** <http://bit.ly/2vSrBdG>

## **FLORIDA STANDARDS**

### **ENGLISH LANGUAGE ARTS**

LAFS.910.RST.1.3: Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.

### **MATHEMATICS**

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.5.1: Use appropriate tools strategically.



*Technology doesn't have to be hard or a burden to use and our students love it."*

## **STUDENTS**

This project can be adapted for any class of any size! Hadassa Levenson has used technology in her classroom for the past five years, and every resource has varying degrees of success as long as students have some access to and familiarity with cell phones and computers.



## **MATERIALS & RESOURCES**

Materials include a tablet or computer for the instructor, any device for students, and a projector. Resources include use of the media center; Internet access; device carts will help enhance this project, but is not necessary.

## **ABOUT THE TEACHER**

Hadassa Levenson has taught for five years in Miami-Dade high schools and has used this project during the entire time. She has received an Adapter Grant from The Education Fund, as well as many smaller grants through websites like DonorsChoose and AdoptAClassroom.

## **SPONSORED BY**



**School District  
Education Foundation  
Matching Grant Program**



## CONTACT INFORMATION JOYCE ROSALES

**SCHOOL:** South Miami K-8 Center

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**EMAIL:** jrosales@dadeschools.net

**PHONE:** 305.667.8847

**DOWNLOAD PROJECT INFO:** <http://bit.ly/2vSVnz4>

# Breakout Edu:

## It's Time for Something Different

Students participate in cooperative learning groups to solve critical thinking problems that lead to unlocking codes, puzzles, and a locked mystery box

Everyone loves a mystery. After all, who can resist the temptation to solve the unknown when presented with a series of locked boxes requiring secret codes to open them? In Breakout Edu, students work together in teams to solve critical thinking problems from various subject areas that lead to solutions for codes and locks to unlock a final mystery box.

To begin a Breakout session, a mystery story is read, then students use clues to begin to solve the codes for unlocking each lock. There are any number of clues and solutions leading to opening all of the locks on the main locked box and solving the mystery. This project can be used as an introduction to a new topic, as a review of concepts learned, or as a final closing activity of a unit of study.



**“** No matter what the topic of the Breakout is, students are gung-ho to participate in either learning or reviewing the topic. ”

### STUDENTS

This project was implemented with approximately 15 to 30 middle school students with achievement levels ranging from ESE and ESOL to Regular and Gifted Education. There are games available at BreakoutEDU.com for all grade levels and subject areas. The games used in each Breakout could also be adapted to almost any grade and achievement level. There are modifications and systems that could be used if the teacher only has one Breakout kit.



### MATERIALS & RESOURCES

Materials include printed hard copies of clues, lock boxes and locks, multilock hasps, BreakoutEdu kit. Resources include Internet and Breakout EDU's website, breakoutedu.com. Teachers can register for free access to all of the games. A password will be sent in order to open the games with their instructions and digital resources (this helps to keep the answers to clues hidden from students).

### ABOUT THE TEACHER

Joyce Rosales has been teaching since 1995, first as a Special Education teacher and then as a Gifted Students teacher. Beginning in 2008, she began teaching computer science and business technology courses for middle school students. She earned three degrees in education and a National Board Certification. She was a regional finalist for Teacher of the Year twice and has written many DonorsChoose projects, The Education Fund projects, and grants from Toshiba America Foundation.

### FLORIDA STANDARDS

#### ENGLISH LANGUAGE ARTS

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 and persuasively.

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

#### MATHEMATICS

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

MAFS.K.12.MP.3.1: Construct viable arguments and critique the reasoning of others.

MAFS.K.12.MP.2.1: Reason abstractly and quantitatively.

### SPONSORED BY



**School District  
Education Foundation  
Matching Grant Program**

# Mindfulness with a Growth Mindset

Students use mindful techniques to empower themselves on a path of self-monitoring and self-improvement



Becoming pro-active rather than reactive towards personal learning, goal setting, and self-monitoring of progress is crucial for students today. They need more tips and tools on how to be empowered, change their fixed mindset, and take more control over their education and choices without fear of failure. This project teaches various techniques to motivate students to not only take more interest in their educational progress and learning, but also better handle stress and anxiety tied to their personal life as well.

Through surveys, Growth Mindset videos, and meditation and visualization sessions, students learn the value of "not yet," giving them the ability to openly say they may not have conquered a concept yet, but will continue to try until they feel they have mastered it. This ideal is reinforced by praising the progress they have made rather than telling them they are smart for finishing a task or getting an answer correct.



## CONTACT INFORMATION ANGELA WEST

**SCHOOL:** Jorge Mas Canosa Middle School

**PRINCIPAL:** Elio Falcon, Jr.

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**PHONE:** 305.252.5900

**DOWNLOAD PROJECT INFO:** <http://bit.ly/2wxOVhD>

## FLORIDA STANDARDS

### HEALTH

HE.8.B.4.3: Examine the possible causes of conflict among youth in schools and communities.

HE.8.B.4.4: Compare and contrast ways to ask for and offer assistance to enhance the health of self and others.

HE.8.B.5.3: Compile the potential outcomes of each option when making a decision.

HE.8.B.5.4: Distinguish when individual or collaborative decision-making is appropriate.

HE.8.B.6.3: Apply strategies and skills needed to attain a personal health goal.

HE.8.P.8.3: Work cooperatively to advocate for healthy individuals, peers, families, and schools.



*The Growth Mindset includes innovative ideas that are quite new to the classroom."*

## STUDENTS

This project involved multiple classes of 8th grade students. It can be taught to any age group, in any subject, and at any level.

## MATERIALS & RESOURCES

Materials include a comfortable space that has an audio device to play an audio file or CD of meditation or visualization; surveys; computer or SmartBoard; essential oils; essential oil diffuser; CD's; meditation and visualization chart; book, *Mindset: The New Psychology of Success*, by Carol Dweck. Resources include Internet access to show the students growth mindset videos, talks, and other charts.



## ABOUT THE TEACHER

Angela West has been teaching Social Studies for approximately 14 years, working at West Miami and Jorge Mas Canosa Middle Schools, and as a Curriculum Support Specialist for the District with the Social Studies department. In 2015-16, she was voted Teacher of the Year and has been an active member of the EESAC Committee for five years. She earned her Masters Degree in History when she was selected as one of 20 M-DCPS Social Studies teachers in a 2007-10 FIU pilot program that covered 97% of her tuition and books. Ms. West has used these techniques throughout her career as counselor/case manager for a juvenile justice residential program, volleyball coach, camp counselor for Girl Scouts, and substitute teacher.

## SPONSORED BY



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# 2017 Idea EXPO

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- Free curriculum materials with Florida Standards

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# 2017 Idea EXPO

## The Teacher Conference

Featuring special keynote presentation by:

## Erin Gruwell

*Teacher, Author, and Founder of the Freedom Writers Foundation*



By fostering an educational philosophy that values and promotes diversity, Erin transformed her students' lives. She encouraged them to re-think rigid beliefs about themselves and others, reconsider daily decisions, and ultimately re-chart their futures. Erin and her students captured their collective journey in *The Freedom Writers Diary*.

Erin founded the Freedom Writers Foundation where she currently teaches educators around the world how to implement her innovative lesson plans into their own classrooms. She created the Freedom Writers Methodology, a progressive teaching philosophy and curricula designed to achieve excellence from all students.

Erin continues to fight for equality in education and inspires teachers and students all over the world with her work.

*Erin's story was featured in the 2007 film, Freedom Writers, starring Hilary Swank.*

*"Erin encouraged me to be bold enough to reposition myself as an educator and to reimagine my classroom to help my students to grow in all areas of their lives. She showed me that learning and teaching should be reciprocal among teachers and students... She is my Educator Hero!"*

Precious Symonette  
Official Freedom Writers Teacher and  
2017 M-DCPS Teacher of the Year

Special thanks to the TriMix Foundation for making this possible through their generous support.

# Register now and save 50% off registration!

Register online at [educationfund.org](http://educationfund.org) by October 23rd using promo code SUMMER2017

## SESSION A

### FINANCIAL LITERACY

#### \_\_\_ Financial Freedom: Cash Flowin' to the Future (NEW) Grades 7-12

Disseminator: Natalia Allen  
Through a series of financial literacy workshops, students learn about finance fundamentals, money management as well as educational planning. Students identify key factors that are important when considering college options, research the total cost of attendance and develop a college plan with a timeline for important deadlines.

#### \_\_\_ Let's Get Poppin'! (NEW) Grades 2-5

Disseminator: Susan Julevich  
Students learn to work collaboratively, hone their math skills and develop self-esteem as they develop and maintain a popcorn business. Each month, a portion of the proceeds is allocated to a service project benefiting the community and the remaining funds are used to purchase classroom materials that the students all collectively agree upon.

### INTERDISCIPLINARY

#### \_\_\_ Google Earth: Using it in the Classroom Grades K-12

Disseminator: 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!

### LANGUAGE ARTS

#### \_\_\_ A Tool Kit for Learning 2.0 Grades K-12

Disseminator: Eugenio Gant  
"A Tool Kit for Learning 2.0" shares updated instructional strategies that can enhance your curriculum and increase student engagement. This workshop combines the best ideas from Bookmaking Bonanza (2011), iPublish: Powerful Pop Ups and Brilliant Brochures (2012) and a "Toolbox" for Teaching and Learning (2014). Fresh student artifacts reflect mastery of the Florida Standards from various subjects and grade levels.

#### \_\_\_ iRead, iImagine, iBuild with LEGO

StoryStarter Grades 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.

#### \_\_\_ Learning A-Z Bridges the Curriculum

Gap for K-5 Foundational Reading Skills: Phonics, Fluency, and Vocabulary (NEW) Grades K-5  
You may teach one grade level, but your learners are as varied as A to Z. How do you accommodate and challenge all of your learners AND fill the gaps with your current curriculum? Here's an idea! Have an arsenal of K-5 supplemental resources for the 5 components of reading – plus leveled readers for

differentiated instruction in your back pocket, filled with digital and printed books, lesson plans, worksheets, and activities... already correlated to Reading Wonders and Florida ELA Standards. Raz Plus can also help fill the gaps for blended learning instruction of phonics, fluency, and vocabulary with a variety of resources that provide hands on instruction. Raz Plus strengthens the connection between what is being taught and what students independently practice whether at school or home – 24 hours a day! Each attendee will receive a free 3-month trial of Raz Plus.

#### \_\_\_ Reading Through Rhymes and Rhythms Grades Pre-K-2

Disseminator: Nancy Sale  
Karaoke is used to help children with visual, aural, and language development.

#### \_\_\_ Shared Moments (NEW) Grades 6-12

Disseminator: Brigette Kinney  
This memoir-writing project gives students an opportunity to reflect on their lives and identify successes, lessons learned, and transformative moments. This reflective process encourages self-awareness, and the study of creative non-fiction from a variety of sources develops empathy and the ability to see commonalities in the human experience.

#### \_\_\_ Teens Taking on Technology (NEW)

Grades 6-12  
Disseminator: Michelle Singh  
After reading a challenging text such as *The Odyssey*, by Homer, students utilize non-traditional, interactive means to demonstrate what they learned in a way that connects them with the real world. Options for project completion using technology include designing a webpage for Odysseus; creating a podcast that focuses on Odysseus' adventure; creating a film documentary and more!

#### \_\_\_ Words of Wisdom: Vivacious

Vocabulary Ventures Grades K-5  
Disseminator: Linda Askari Blanchfield  
This workshop offers a plethora of activities to stimulate an interest in words. This project includes innovative, hands-on practical activities to learn and reinforce vocabulary, class games to make practicing an invigorating experience and home learning tasks to achieve success.

### SOCIAL STUDIES

#### \_\_\_ Bonnets and Bandanas: Settler Trading

Post Economics (NEW) 2-5  
Disseminator: Katie Prelaz  
By recreating an early Miami trading post, the early history comes alive for students as they learn about essential economic concepts.

#### \_\_\_ Teaching Trunks on the Holocaust

Grades 1-12  
Disseminator: Esther Sterental  
Teaching Trunks from the Florida Holocaust Museum in St. Petersburg 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.

#### \_\_\_ Women in The Holocaust – Rescue and Resistance Grades 4-12

Presenter: Dr. Miriam Klein Kassenoff  
Women played an important role in various resistance and rescue efforts. This powerful presentation will substantially aid you in Teaching the Holocaust highlighting the amazing accomplishments of women and actually hearing their voices live. Dr Miriam is herself a child survivor of the Holocaust and Education Specialist for the M-DCPS speaking here in person. A presentation not to be missed!

### STEM

#### \_\_\_ Come Fly With Me (NEW) Grades 5-12

Disseminator: Adam Mack  
Up, up, and away! Students are introduced to the physics of flight by building and flying their own drones. Through engineering and design modifications, students will eventually be proficient enough to participate in local drone competitions.

#### \_\_\_ Engineering is Elementary My Dear Watson! (NEW) Grades K-5

Disseminator: Navia Gomez  
This project introduces students to activities that develop creativity, critical thinking, and problem-solving skills. Students solve real-life problems by using the engineering design process as they ask, imagine, plan, create and improve.

#### \_\_\_ Makey Makey Makerspace (NEW)

Grades 4-10  
Disseminator: Dale Adamson  
Makey Makey circuit boards transform a classroom into a Makerspace where critical thinking and creativity thrive while students learn about circuits, electronics, and computer science. In one project, students make music by using Scratch to write small programs that allow the Makey Makey boards to turn a bunch of bananas into a piano keyboard. The reusable Makey Makey boards are limitless.

#### \_\_\_ Transformations are Easier if the Force is with You Grades 9-12

Disseminator: Richard Boyd  
Students discover the effects of transformations on algebraic functions through an inquiry-based lesson, which inspires students to discover the rules for rigid transformations of functions. Students not only explore the effects of translations in functions, but also connect functions and their graphs to everyday life.

### FOOD FORESTS FOR SCHOOLS (Interdisciplinary Studies Using School Gardens)

#### \_\_\_ 50 Shades of Green (NEW) Grades K-5

Presenter: Eddie Recinos  
Who says that edible plants can't grow in the shade? Welcome to the world of food forests... the shady side of gardening! Learn about fast growing trees for your garden and the food forest plants that will thrive beneath them. Explore the benefits of a fast growing, edible canopy and gardening in the cool shade. Stop throwing shade and start keeping people and plants out of the smoldering sun!

#### \_\_\_ Garden Tasting in the Classroom (NEW)

Grades K-5  
Presenter: Chef Paula Kendrick  
A chef, Fresh from Florida ingredients, cooking and eating. This is a workshop you will not want to miss. Chef Paula will take you on a culinary tour with ingredients that will thrive in your school garden. Learn how to prepare healthy, simple recipes that will also teach math and science concepts to your students. With these Florida Harvest of the Month classroom recipes, you and your students will always look forward to the next nutrition lesson.

#### \_\_\_ Healthy Cooking for Grades K-5 (NEW)

Presenter: Lesley Thompsett  
Cooking in the classroom is a great way to teach across the curriculum. This presentation will share tools, tips and techniques to manage healthy cooking activities with students. Learn about simple recipes that your students will devour and how each one links to teaching standards. You will never use candy as an unhealthy incentive once you have mastered these skills!

#### \_\_\_ Rain Clouds In My Garden (NEW)

Grades K-5  
Presenter: Marcelle Farley  
Does weather affect your nutrition? Why do my plants double in size after a thunderstorm? Why do my tomatoes taste sweeter after a cold front? Explore the science of how rain, drought, and temperature affects the foods you eat. Help your students track and journal weather conditions so your garden can thrive in all weather.

#### \_\_\_ Tools, Teepees, and Trellises (NEW)

Grades K-5  
Presenter: Sam Chillaron  
Learn basic garden construction and become a DIY champ! There are many ways to create basic garden structures for edible plants to grow on. Start with a basic teepee and work your way up to an arbor! Take advantage of vertical space and beautify your garden. This is a project that students will never forget.

### VISUAL ARTS

#### \_\_\_ Enlarging Masterpieces Grades K-12 (2 BLOCK SESSION A & B)

Disseminator: Michael Flaum  
Learn to create and enlarge paintings, for murals, backdrops, wall decorations. Participants will create an enlargement at the workshop.

### OTHER

#### \_\_\_ Grant Writing Workshop

Presenter: Zeny Ulloa, Past Grant Recipient  
Practical advice on grant writing including Innovator Grants. Leave the workshop with an Adapter Grant application almost complete!

#### \_\_\_ Use Social Media to Enhance Your Teaching Success

Disseminator: Patricia Maldonado  
Learn how to use various social media platforms to inform and engage parents, other teachers, and school administrators on what is happening in your classroom. Showcase your classroom projects and elevate your work!



## SESSION B

### CLASSROOM MANAGEMENT

\_\_\_ **Keeping Your Students Engaged: 20 Terrific Time-on-Task Tricks** Grades K-5  
Disseminator: Linda Askari Blanchfield  
This is a workshop to help teachers improve students' attention and focus. There are NEW tricks added since this workshop was first given!

### INTERDISCIPLINARY

\_\_\_ **Taking Advantage of Technology - At Any Level!** (NEW) Grades 4-12  
Disseminator: Hadassa Levenson  
Technology can work in any classroom, regardless of circumstance. As long as students have a device like a computer, tablet, or cell phone on a consistent basis, test scores and class grades have a great chance of improving. Applications can be used for engagement and information sharing, real-world application, self-directed learning, remediation and review, and fun and games.

### LANGUAGE ARTS

\_\_\_ **A Tool Kit for Learning 2.0** Grades K-12  
Disseminator: Eugenio Gant  
(See workshop description under Session A)

\_\_\_ **Badges of Honor** Grades Pre-K-12  
Disseminator: Brigitte Kinney  
This character education project recognizes students not just for academic achievement, but for personal qualities such as kindness, cooperation, and honesty, creating a positive school culture and building self-esteem. Students are recognized with a "badge of honor," which is created by their peers.

\_\_\_ **Billboard Text-Features Project** (NEW) Grades 5-10  
Disseminator: Ileen Martin  
Improve quiz scores and promote enthusiasm for literacy as students create a text-features style "billboard" of their book, advertising its multiple literary elements in an eye-catching and creative way.

\_\_\_ **Learning A-Z Bridges the Curriculum Gap - Using Science A-Z to Integrate Literacy into the Content Areas** (NEW) Grades K-6  
With the growing emphasis on STEM education and rigorous science curriculum standards, K-6 teachers need flexible, high-quality resources that allow them to easily integrate both reading and science into their daily curriculum. This

session will explore how Science A-Z can help you use leveled content and hands-on learning experiences to differentiate your science instruction, and strengthen students' reading skills and scientific literacy. Science A-Z is aligned to the Florida Science Standards and correlated to Gizmos! Each unit non-fiction anchor text comes with a lesson plan that includes a reading strategy and comprehension skill! In addition to a robust library of multilevel informational texts, Science A-Z also delivers engaging science experiments, hands-on activities, and other collaborative learning opportunities that allow students to think and act like scientists. Each attendee will receive a free 3-month trial of Science A-Z.

\_\_\_ **Shakespeare Our Way!** Grades 9-12  
Disseminator: Griselis Reyes  
What if you reimagined Julius Ceasar as Lord Voldemort, or Darth Vader? Students transform their favorite scenes by working together to rewrite and act out Shakespeare's most famous scenes using themes such as Harry Potter, Star Wars, Hip-Hop, and more. There is no better way to test students' text comprehension than by having them creatively prove they understand it while also having fun!

\_\_\_ **Slamming My Story** (NEW) Grades 2-12  
Disseminator: Precious Symonette  
This creative writing project allows students to become more involved in their community and to develop skills such as public speaking, writing, and networking abilities that will help them to be successful on an academic, professional, and social level. Students participate in Journal Jams, Think Tanks, Socratic Seminars, and are prompted to compose a SLAM Poem and present it to their school population and the community-at-large.

\_\_\_ **Terrific Teaching Through Technology** Grades K-5  
Disseminator: Nancy Sale  
Children are fascinated with storytelling. Adding technology motivates them even more! Using digital storytelling and iBooks Author, students collaborate to write about their edible garden infusing their book with iPad photos, embedded videos, live websites, music and sound effects!

### SOCIAL STUDIES

\_\_\_ **Ancient Egypt in Modern Miami** Grades 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.

\_\_\_ **Surviving a Zombie Apocalypse** (NEW) Grades 9-12  
Disseminator: Dr. Keith Astuto  
Students apply the basic laws of economics as they navigate through the world of the undead - this project is an adaptation of the classic simulation, "Capsized Canoe." Students work in teams to problem-solve, using whatever resources are available for shelter and obtaining supplies for survival.

\_\_\_ **Teaching Trunks on the Holocaust** Grades 1-12  
Disseminator: Esther Sterental  
(See workshop description under Session A)

### STEM

\_\_\_ **Engineering By Design (3-D Printing)** (NEW) Grades 6-12  
Disseminator: Dr. Suzanne Banas  
Learn how to bring 3-D printing into your classroom! This workshop covers the hardware needed for 3-D printing and the engineering and design process. With 3-D printing, students develop and create prototypes, then test, evaluate, and redesign as needed.

\_\_\_ **"Cracking" Science Cycles to "STEM" Environmental Impact** (NEW) Grades K-6  
Disseminator: Mayra Brody  
By using a chick incubator and scope, students observe and document how chicken eggs evolve from embryos to baby chicks. Students will also develop a STEM project that identifies environmental issues affecting animals and brainstorm possible solutions.

\_\_\_ **Art + Coding = Math Success** (NEW) Grades K-12  
Disseminator: Zeny Ulloa  
Using Studio Art lessons from Code.org, students are able to visualize abstract math concepts and improve their problem-solving skills.

\_\_\_ **It's a Crazy Chain: Building Rube Goldberg Machines** (NEW) Grades 3-12  
Disseminator: Lisa Hauser  
Inspired by Rube Goldberg's Pulitzer Prize-winning cartoons, students design, build, and fine-tune a compound machine with a minimum of three steps to accomplish a relatively simple task.

\_\_\_ **Molecules that Shaped History** (NEW) Grades 9-12  
Disseminator: Logan Johnson  
Students gain a new perspective on how chemistry has shaped our world during an interdisciplinary study that fuses chemistry with history. After reading portions of *Napoleon's Buttons: Seventeen Molecules that Changed History*, students select two molecules to research and present them in a visually interesting way to their peers. Additionally, the project includes two labs where students synthesize nylon and aspirin.

\_\_\_ **STEM Squad: Starting a Robotics Club at Your School** (NEW) Grades 3-8  
Disseminator: Dale Adamson  
For students just beginning to take an interest in robotics, VEX IQ robotic systems are an

excellent introduction. Students create a prototype to meet competition qualifications and then compare their model with the proposed model from VEX IQ. The STEM Squad coordinator encourages students to modify their robot and use the competition board to find ways to improve their performance in the competition task.

\_\_\_ **STEM made SIMPLE (Sensible, Integrated, Meaningful, Purposeful Learning, & Engaging)** Grades K-5  
Disseminator: Navia Gomez  
Are you looking for ways to make STEM fun for your students while ensuring important concepts are being learned? Further project-based learning with exciting hands-on projects such as making a paper helicopter, a windmill, parachutes, a lunar lander, and a catapult.

### FOOD FORESTS FOR SCHOOLS (Interdisciplinary Studies Using Your School Garden)

\_\_\_ **Florida Harvest of the Month** (NEW) Grades K-8  
Presenter: Kristi Hatakka  
Want to add some "flavor" to your curriculum? Learn how to incorporate nutrition and agricultural lessons into core subject areas using the Florida Farm to School "Harvest of the Month" Program. Lesson plans, worksheets, garden activities, posters, stickers and more to engage K-8 students in standards-based learning, while connecting them to their local food system.

\_\_\_ **Harvest Photography** (NEW) Grades K-5  
Presenter: Tony Chirinos  
Do teachers and students like taking pictures? Who doesn't? This workshop will teach you the basics of taking quality photographs of your school garden with your phone or tablet. Take this workshop now and learn how to use your garden pictures with students for science and language arts through journaling and social media. Learn from a master photographer about light, filters, and composition. As a bonus, you are guaranteed to never post another terrible food picture!

\_\_\_ **Rain Clouds In My Garden** (NEW) Grades K-5  
Presenter: Marcelle Farley  
(See workshop description under Session A)

\_\_\_ **Tools, Teepees, and Trellises** (NEW) Grades K-5  
Presenter: Sam Chillaron  
(See workshop description under Session A)

\_\_\_ **Windchimes** (NEW) Grades K-5  
Presenter: Gloria Parlade  
Unleash your inner artist and create a musical windchime for your garden. This is an exciting way to teach about science concepts such as weather, sound, weight and balance. This project is only limited by your imagination so put away those textbooks and start creating! With the wind as your ally, your students will soar!

### OTHER

\_\_\_ **Grant Writing Workshop**  
Presenter: Michelle Singh, Past Grant Recipient  
Practical advice on grant writing including Innovator Grants. Leave the workshop with an Adapter Grant application almost complete!

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## SESSION C

### CLASSROOM MANAGEMENT

\_\_\_ **Mindfulness with a Growth Mindset (NEW)** Grades K-12

Disseminator: Angela West

This project teaches various techniques to motivate students to not only take more interest in their educational progress and learning, but also better handle stress and anxiety tied to their personal life as well.

### FINANCIAL LITERACY

\_\_\_ **Bank It!** Grades 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 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.

### INTERDISCIPLINARY

\_\_\_ **Breakout EDU: It's Time for Something Different (NEW)** Grades 2-12

Disseminator: Joyce Rosales

Everyone loves a mystery. Students work together in teams to solve critical thinking problems from various subject areas that lead to solutions for a series of codes and locks to unlock a final mystery box.

### LANGUAGE ARTS

\_\_\_ **A Tool Kit for Learning 2.0** Grades K-12

Disseminator: Eugenio Gant

(See workshop description under Session A)

\_\_\_ **Fearless Like TED (NEW)** Grades 5-12

Disseminator: Samantha Moulton

After viewing several TED Talk videos, students write down their impressions and then answer journal prompts that mimic specific patterns that tend to come up in the course of a TED Talk speech. Students learn to overcome their fear of public speaking as they research a topic that they are passionate about and prepare their own TED Talk-style speech.

\_\_\_ **Learning A-Z Bridges the Curriculum Gap for K-5 Foundational Reading Skills: Phonics, Fluency, and Vocabulary (NEW)** Grades K-5

You may teach one grade level, but your learners are as varied as A to Z. How do you accommodate and challenge all of your learners AND fill the gaps with your current curriculum? Here's an idea! Have an arsenal of K-5 supplemental resources for the 5 components of reading – plus leveled readers for differentiated instruction in your back pocket, filled with digital and printed books, lesson plans, worksheets, and activities... already correlated to Reading Wonders and Florida ELA Standards. Raz Plus can also help fill the gaps for blended learning instruction of phonics, fluency, and vocabulary

with a variety of resources that provide hands on instruction. Raz Plus strengthens the connection between what is being taught and what students independently practice whether at school or home – 24 hours a day! Each attendee will receive a free 3-month trial of Raz Plus.

\_\_\_ **Punctuation Station Grammar Board Game** Grades 6-8

Disseminator: Ileen Martin

Need a fun and creative way to make grammar more memorable? This project allows students to collaborate together and create an exciting, hands-on board game that makes learning and reviewing grammar concepts an unforgettable experience.

\_\_\_ **Reader's Theater Makes Great Readers!** Grades 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.

\_\_\_ **See It In Print!** Grades 5-8

Disseminator: Brigette Kinney

Students become published authors by utilizing digital tools as they create a thematic literary magazine. From brainstorming to the bookshelf, students participate in every step of the publishing process. Explore four genres of literature: short story, fiction, non-fiction, and poetry.

\_\_\_ **Unmasking My Character** Grades 9-10

Disseminator: Griselis Reyes

While reading and annotating examples of both direct and indirect characterization, students understand character development in literature. 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.

### SOCIAL STUDIES

\_\_\_ **Teaching Trunks on the Holocaust** Grades 1-12

Disseminator: Esther Sterental

(See workshop description under Session A)

### STEM

\_\_\_ **Engineering Design Process (NEW)** Grades 6-12

Disseminator: Anike Sakariyawo

Students utilize the engineering design process as they design a catapult using a VEX Robotics kit to launch objects at a target. Through this detailed process, students with different learning styles not only attain academic success, they also achieve higher self-esteem, increase their vocabulary, and learn volumes through discovery and inquiry.

\_\_\_ **Become a Robotics Expert Easily (NEW)** Grades 5-10

Disseminator: Dr. Suzanne Banas

Using RedBot kits, students learn basic

electronics circuitry through a series of nine experiments. Students are then able to apply their knowledge towards creating their own robot platform.

\_\_\_ **LEGO: MoreToMath Than Meets the Eye** Grades K-3

Disseminator: Zeny Ulloa

An innovative hands-on educational tool for targeting mathematical problem solving, the LEGO brick makes theoretical and abstract mathematical concepts tangible for students. The MoreToMath set successfully provides students with the visual/kinesthetic tools to reinforce and understand the latest curriculum standards.

\_\_\_ **Come CODE With Me** Grades 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.

\_\_\_ **How Things Fly: Paper Airplanes** Grades K-6

Disseminator: Dr. 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 build paper planes following instructions for different models, thereby learning the effects of mass, air resistance, shape, and weight.

\_\_\_ **Nature Buddies** Grades Pre-K-5

Disseminator: Navia Gomez

Nature sets the stage to learn scientific inquiry. Older students link with younger ones to observe nature and record, illustrate, collect, and share their findings.

### VISUAL ARTS

\_\_\_ **Eco Prints (NEW)** Grades 1-12

Disseminator: Susan Feliciano

Students think creatively and experiment as they discover a natural dyeing process using plants, flowers, leaves, vegetables and fruits. Students create a book with intricate designs and patterns by using heat to transfer natural pigments from the plants to paper.

### FOOD FORESTS FOR SCHOOLS (Interdisciplinary Studies Using Your School Garden)

\_\_\_ **Edible, Tropical Bamboo (NEW)** Grades K-5

Presenter: Robert Saporito

Everyone knows that bamboo is beautiful, but did you know that the right variety can provide you with food for over 100 years? Come sample some bamboo shoots and learn more about this amazing grass. There are dozens of varieties of non-invasive, highly productive, clumping bamboos with huge, delicious, shoots. Plus if you grow enough of it, you can build a home! Need we say more?

\_\_\_ **Essential Oils and Infusions for Wellness** Grades K-5

Presenter: Alena Sheriff

Take a deep breath. Do you smell the aroma of Kaffir lime with hints of ginger and lemongrass emanating from your tea cup? What about the fresh scent of rosemary in the air wafting from your student's herbal sachets? Welcome to the relaxing world of essential oils.

\_\_\_ **Harvest Photography (NEW)** Grades K-5

Presenter: Tony Chirinos

(See workshop description under Session B)

\_\_\_ **Turn Food Waste to Good Taste** Grades K-5

Presenter: Zarron Brown

Take an undulating journey through the world of earthworms with The Worm Whisperer. Tunnel your way through science topics such as soil types and forest ecosystems. Learn how earthworm composting completes the cycle from waste to taste, and how our spineless friends create an optimal balance for growing healthy food. After this workshop, you will be ready to introduce your students to these wriggly garden helpers!

\_\_\_ **Windchimes (NEW)** Grades K-5

Presenter: Gloria Parlade

(See workshop description under Session B)

### OTHER

\_\_\_ **Grant Writing Workshop**

Presenter: Michelle Singh, Past Grant Recipient  
Practical advice on grant writing including Innovator Grants. Leave the workshop with an Adapter Grant application almost complete!

\_\_\_ **National Board Certified Teachers Information Session**

Disseminator: Judith Grey, NBCT

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

\_\_\_ **SmartPath: Guide to College Clubs** Grades 6-12

Presenters: Ana Barreto-Maloney ,

Lauren Jean, and Zoe Madison

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.

## SESSION D

### LANGUAGE ARTS

#### \_\_\_ "Sense"-sational Story Time Snacks

Grades Pre-K-2

Disseminator: Mayra Perez

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

#### \_\_\_ Don't Let Go that LEGO! (NEW)

Grades K-8

Disseminator: Duysevi Miyar

As a tactile approach to reading and writing, students use LEGO StoryStarter to develop skills in analyzing story elements, identifying genres, and enhancing personal speaking and listening abilities.

#### \_\_\_ Haiku History Grades 5-12

Disseminator: Michelle Singh

Haiku History stimulates student interest in 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.

#### \_\_\_ Help! My Fairy Tale Has Been Fractured!

Grades 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.

#### \_\_\_ Learning A-Z Bridges the Curriculum Gap - Using Science A-Z to Integrate Literacy into the Content Areas (NEW) Grades K-6

With the growing emphasis on STEM education and rigorous science curriculum standards, K-6 teachers need flexible, high-quality resources that allow them to easily integrate both reading and science into their daily curriculum. This session will explore how Science A-Z can help you use leveled content and hands-on learning experiences to differentiate your science instruction, and strengthen students' reading skills and scientific literacy. Science A-Z is aligned to the Florida Science Standards and

correlated to Gizmos! Each unit non-fiction anchor text comes with a lesson plan that includes a reading strategy and comprehension skill! In addition to a robust library of multilevel informational texts, Science A-Z also delivers engaging science experiments, hands-on activities, and other collaborative learning opportunities that allow students to think and act like scientists. Each attendee will receive a free 3-month trial of Science A-Z.

### SOCIAL STUDIES

#### \_\_\_ Bystanders No More! (NEW) Grades 2-8

Disseminator: Susan Rosenthal

With an in-depth study into how the Holocaust began and what was the Holocaust, students are instilled with empathy and brainstorm ideas on what they could possibly do to prevent similar events from happening again.

#### \_\_\_ Teaching Trunks on the Holocaust

Grades 1-12

Disseminator: Esther Sterental

(See workshop description under Session A)

### STEM

#### \_\_\_ Using Blackberries to Create a Solar Cell (NEW) Grades 6-8

Disseminator: Tongala Lynn

This interactive, hands-on lesson, places students in the engineering driver's seat where they learn to use the dye from

blackberries to create a device that can convert light/solar energy into electric energy. It also gives students the opportunity to glean insight as to what some engineers do and how these effects can be useful in helping to minimize the future energy costs, both environmentally and monetarily.

#### \_\_\_ Animals in the Classroom Grades K-12

Disseminator: 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.

#### \_\_\_ Butterfly Bonanza Grades Pre-K-6

Disseminator: Nancy Sale

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

#### \_\_\_ Building Bridges Grades 3-5

Disseminator: Navia Gomez

Students are introduced to the engineering process of problem-solving, researching, designing and building as they create bridges out of everyday items. A gallery walk of the bridges takes place on a community STEM night.

#### \_\_\_ Topo-Mapping From Space Grades 3-5

Disseminator: Dr. Rossana Chiarella

By exploring how probes measure landscapes, students learn through a series of hands-on activities how to create topographical maps of Earth and other planets. Increased knowledge on planets' topography allows students to develop better ideas about effective exploration and initial formation of planets, their growth, and chronological development.

### FOOD FORESTS FOR SCHOOLS (Interdisciplinary Studies Using Your School Garden)

#### \_\_\_ Edible, Tropical Bamboo Grades K-5

Presenter: Robert Saporito

(See workshop description under Session C)

#### \_\_\_ Essential Oils and Infusions for Wellness Grades K-5

Presenter: Alena Sheriff

(See workshop description under Session C)

#### \_\_\_ Healthy Classroom Celebrations (NEW)

Grades K-5

Presenter: Lisa Warren

Birthdays, holidays and special events in the classroom can add up to a lot of sugar. Reverse the trend and celebrate health! Learn how good nutrition and fun games can be combined to form the ultimate classroom bash. Students will never forget these epic events, and they will be healthier for doing it. Warning: this workshop may include carrots and strobe lights...

#### \_\_\_ Pre-K Garden Experience (NEW)

Grades Pre-K-5

Presenter: Jacey Nerey

It's natural for young children to want to explore when they are outdoors but gardening with students doesn't have to be like herding cats. Learn outdoor classroom management from an experienced Pre-K garden teacher. Make gardening feel like an adventure. While still maintaining order. Discover exciting garden activities to keep your students learning while you keep your composure and your sanity. Everyone wins!

#### \_\_\_ Turn Food Waste to Good Taste

Grades K-5

Presenter: Zarron Brown

(See workshop description under Session C)

### OTHER

#### \_\_\_ Grant Writing Workshop

Presenter: Zeny Ulloa, Past Grant Recipient

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

#### \_\_\_ SmartPath: Guide to College Clubs

Grades 6-12

Presenters: Ana Barreto, Lauren Jean, and

Zoe Madison

(See workshop description under Session C)





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