THE EDUCATION FUND'S

2016-2017 ideas with IMPACT

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CELEBRATING 30 YEARS

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$$$
for your
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see page 5

Running on Sunshine,
The Art of Robotics,
Shakespeare Our Way &

33 other inspiring ways to cover FLORIDA STANDARDS

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

The Education Fund: Innovation in Action for Education

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

- ★ $46 million raised for public schools
- ★ 31,617 students' eating habits improved through an edible garden laboratory initiative
- ★ 34% increase in college enrollement attained as part of a national demonstration project
- ★ $8.1 million in free supplies for classrooms, benefitting 1+ million students
- ★ $2.6 million granted to teachers to foster student achievement in 4,550 classrooms
- ★ 10,500+ computers to students and parents
- ★ $1.1 million raised for schools' visual arts programs
- ★ 1,875 business professionals teach for a day

THE EDUCATION FUND
CELEBRATING 30 YEARS

www.educationfund.org

Attention Teachers! Get FREE supplies!

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

To receive a pass to shop for free, visit www.educationfund.org, and click on the "For Educators" button.

2016-2017 Ideas with IMPACT Table of Contents

George Van Wyck, *a long-time executive of Assurant, was one of the nine founding community leaders whose names grace The Education Fund's by-laws, and whose commitment was steadfast. As* ***Assurant*** *launched its own satellite public school, George could often be seen conversing with the children, even reading to them. We are thankful to Assurant Foundation and are honored to pay homage to such a devoted man with these stellar Reading projects.*

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

The Education Fund's *Ideas with IMPACT*

Production Director: Edwina Lau • The Education Fund • www.educationfund.org • 305-558-4544

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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 IMPACT II program offers teacher new ways to engage South Florida students.

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

Ford

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 IMPACT II, The Education Fund gives 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 IMPACT II Idea 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 curriculum and entrepreneurialism, but lessons that celebrate our diversity and inspire acceptance.

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

Alberto M. Carvalho
Superintendent of Schools

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

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

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

HOW IMPACT II CAN WORK FOR YOU

- **ATTEND** the Idea EXPO - The Teacher Conference, Saturday, December 3, 2016 at the Miami Airport Convention Center (711 NW 72nd Avenue, Miami). **Workshops are listed on pages 30-34 of this catalog.**
    - Select from 90+ hands-on K-12 workshops
    - Free curriculum materials to cover Florida Standards
    - Receive special consideration when applying for an Adapter Grant
    - Earn 9 M-DCPS Master Plan Points!
- **APPLY** for an **Innovator Grant** to implement a new teaching idea that motivates and challenges students to learn. Applications are available now at educationfund.org. **Deadline is October 12th.**
- **APPLY** for an **Adapter Grant** to purchase materials to adapt one of the ideas featured in this catalog or in past years' catalogs. Contact the teacher who developed the idea to discuss your adaptation. Grant applications available now at educationfund.org. **Apply by December 11th.**
- **APPEAR** in next year's *Ideas with IMPACT* catalog. **Apply for a Disseminator Grant by April 1st.**
- **ACCESS** online applications, curriculum Idea Packets, and Idea EXPO registration at educationfund.org

Making money make sense

for grades K–12.

TD Bank

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

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

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

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

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TD Bank's WOW! Zone

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

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

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

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

Students

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

Materials & Resources

TD Bank WOW! Zone Website

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

TD Bank Finance 101 Website

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

TD Bank Instructors

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

Junior Banker Store Tour

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

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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TD Bank

America's Most Convenient Bank®

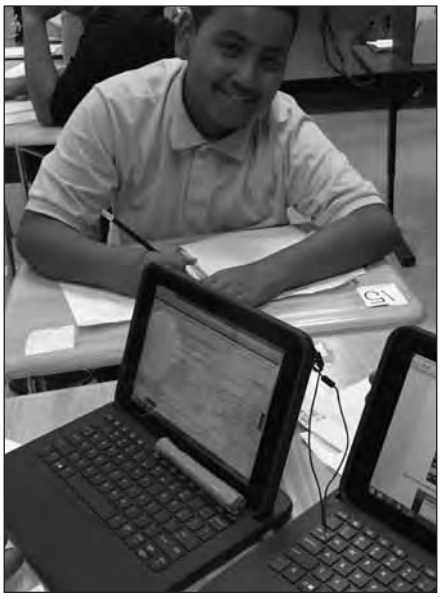
To register for a WOW! Zone class or set up a Junior Banker Store Tour visit:

www. tdbank.com/wowzone

Students who complete the program receive a certificate for a new TD Simple Savings Account.

Bulls, Bears, & Buckland: Financial Literacy for Millennials

"By creating a simulated investment portfolio, students become actively engaged in the process of real-life stock market exchanges."



The investment world comes alive for students as they create a simulated investment portfolio and become actively engaged in the process of real-life stock market exchanges. *Bulls, Bears, & Buckland: Financial Literacy for Millennials* exposes students to the day-to-day activities of a long-term investor actively seeking fundamentals of both companies and exchanges through real-time investment simulations.

Activities leading up to making simulated trades include creating Concept Books for vocabulary learning and concept building, Notes-Question-Answers Booklets (NQA) for taking notes on video learning and discussions, and following Current Events related to the Stock Market from a reliable financial news source. Students will then learn "Fundamentals," analyze charts and data points, develop criteria for the selection of stocks, and select their stocks. Next, students create free Investopedia simulated accounts, learn how to use the simulated trading platform and create, monitor, and manage their own portfolio consisting of their selected stocks.

This project fosters engagement and motivation because all the learning associated with the activity culminates with the ability to manage the investment platform simulator. Since the students create their own stock/company selection criteria based on the "Fundamentals" instruction and select their own stocks, they are in total control of their portfolio which makes the project not only authentic but also meaningful to them.

Sponsored by

School District Education Foundation Matching Grant Program

Daniel Buckland
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South Dade Middle School
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Principal: John A. Galardi

Students

A total of 123 students from six classes participated in this project, meeting, every day for a total of 10 days, and worked in a whole classroom setting as well as small groups to complete the various activities leading up to and including the trade simulations. This project can be easily adapted to meet the needs of diverse and/or struggling learners.

Staff

Daniel Buckland graduated from Florida State University with a degree in Interdisciplinary Social Sciences in 2001 and has been a Social Studies teacher for Miami-Dade County Public Schools for the past 15 years. From 2010-2012, he was a teacher on special assignment working as South Region Organizer for United Teachers of Dade. Mr. Buckland's classroom experience includes teaching at Centennial Middle School where he was voted Social Studies Teacher of the Year, Richmond Heights Middle School where he was also voted Social Studies Teacher of the Year, and South Dade Middle School in Homestead, where he teaches currently.

Materials & Resources

Materials include file folders (portfolios); paper; pencils; color pencils, Concept Books/NQA/Current Event and templates; internet access; electronic devices/computers; and SmartBoard/projector. Resources include YouTube, BrainPop, Investopedia, financial periodicals, and newspapers.

Standards

English Language Arts

LAFS.8.RI.1.3: Analyze how a text makes connections among and distinctions between individuals, ideas, or events (e.g., through comparisons, analogies, or categories).

Social Studies

SS.4.FL.5.1: Explain that after people have saved some of their income, they must decide how to invest their savings so that it can grow over time.

SS.8.FL.5.5: Explain that the rate of return earned from investments will vary according to the amount of risk and, in general, a trade-off exists between the security of an investment and its expected rate of return.

Monthly Money Matters

"Students practice the financial responsibility tools that they will need in their future."

Students in *Monthly Money Matters* are unlikely to live paycheck to paycheck in their future. In this project, students learn how to save money, avoid debt, calculate taxes, and be fiscally responsible. They have also been able to apply the knowledge of generating spreadsheets and charts using Microsoft Excel.

Students are given a specific profession and a yearly gross income. They research what their tax bracket would be for the previous fiscal year for their income level. Students calculate their net income and monthly budget and learn about financial rules of thumb such as rent not exceeding 20% of your income. They find an apartment or house in their local area that they can afford with their fictitious income.

Students practice the financial responsibility tools that they will need in their future.

Students

The students who participated in this project ranged from grades 6 through 8. Students met once per day, for 55 minutes. This project can be adapted for other grade levels by increasing or reducing rigor through templates and guided practice.

Staff

Mariana Praschnik is a middle school teacher who has taught English language arts, intensive reading, and computer business technology courses for about five years. Last year, she received the Rookie Teacher of the Year award. Ms. Praschnik has used this project for two years without any paraprofessionals to facilitate.

Materials & Resources

Materials include computers with Microsoft Office, paper, writing utensils, and internet access. A Smart or Promethean board is useful for guiding students through Excel formulas and functions. Templates for assigning professions, identifying expenses, and a formula cheat sheet for the formulas needed to complete this project are available through the Disseminator.

Internet resources, such as bankrate.com/finance/taxes/tax-brackets.aspx are needed for finding tax bracket information. (Please note this resource changes each year.) Students are also directed to realtor.com, trulia.com, and zillow.com for finding information on housing.

Standards

English Language Arts

LAFS.6.W.3.7: Conduct short research projects to answer a question, drawing on several sources and refocusing the inquiry when appropriate.

LAFS.6.SL.2.5: Include multimedia components (e.g., graphics, images, music, sound) and visual displays in presentations to clarify information.

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.6.NS.2.3: Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.

Sponsored by

Mariana Praschnik
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Ruth K. Broad/Bay Harbor K-8 Center
Mail Code: 0241
305-865-7912
Principal: Dr. Maria Rodriguez

To Borrow or Not to Borrow? Financing a College Education

"Students explore college options from a financial perspective and demonstrate mastery of financial literacy concepts through a visually stimulating scrapbook."

Students' attitudes towards attending college are on an upward climb! They understand that the ability to attend college is linked to GPA, rank, and the ability to secure financial aid. Students seek to reduce the financial impact and burden a college education may place on them or their families. *To Borrow or Not to Borrow?* allows students to explore college from a fresh, eye-opening point of view, combining financial literacy with art.

In this project, students explore college options from a financial perspective and demonstrate mastery of financial literacy concepts through a visually stimulating scrapbook. An example of a scrapbook page can be the comparison of the cost of attendance at different colleges, calculating budgets that include expenses specific to each college, and taking into account geographical location factors such as cost of living, traveling home, etc. Students would then create visual scrapbooking elements to demonstrate the combined cost to attend each college.

When lessons combine several elements of financial literacy with individual artistic expression, students' interest and confidence to attend college increases.

Sponsored by

Tandy Caraway
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305-271-3311
Principal: Magda R. Pereira

Students

Originally, this project was carried out with 9th-12th grade mathematics students. Students can work on this daily, or weekly, if it is a more long-term project. It can be used with students from grades 6-12, on a traditional or honors track, or for grades 6-8, where it may be ideal to divide students into groups or reduce the grading criteria. This project can be adapted to other visual mediums such as film, posters, infographics, or physical 3-D models.

Staff

Tandy Caraway has been a classroom teacher for more than 14 years. Her awards include Teacher of the Year at her school site, a National Honorable Mention for the American Board for Certification of Teacher Excellence, the Spot Success Award, and the recipient of a Teach and Inspire Fellowship. She has garnered multiple grants such as the Florida Learn & Serve pilot and renewal grants, the State Farm/University of Florida grant, the Sprint Character Education grant, and a Rookie FIRST grant.

Materials & Resources

Students need electronic devices, physical scrapbooking materials or virtual scrapbooking software, financial literacy textbooks, workbooks, lesson guides, and grading rubrics. Other software may include Excel, PowerPoint, clipart databases, EDU Glogster, and Smilebox.

Students may use the media center or a public library to perform research on colleges and student loans. Teachers may invite independent college counselors or financial advisors as guest speakers.

Standards

Social Studies

SS.912.FL.4.1: Discuss ways that consumers can compare the cost of credit by using the annual percentage rate (APR), initial fees charged, and fees charged for late payment or missed payments.

SS.912.FL.4.8: Examine the fact that failure to repay a loan has significant consequences for borrowers.

Visual Art

VA.912.C.2.2: Assess the works of others, using established or derived criteria, to support conclusions and judgments about artistic progress.

VA.4.F.3.3: Work purposefully to complete personal works of art in a timely manner, demonstrating development of 21st-century skills.

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

" There is hope everywhere."
— Anne Sexton

Humana Foundation

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The Education Fund's Edible Gardens
A Collaborative Nutrition Initiative

"Due to the program's success, the Edible Garden Network has now expanded to 51 schools, benefitting more than 31,600 students annually."

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

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

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

In 2015, The Education Fund, with support from **Health Foundation of South Florida,** and M-DCPS Department of Food and Nutrition, provided workshops for cafeteria managers and teachers on using fresh fruits and vegetables from the school gardens to enhance school lunches. Garden produce was used in our Edible Garden Initiative schools 717 times in just over a year!

The Education Fund's Edible Gardens
A Collaborative Nutrition Initiative

Also in 2015, **Citi Gardens® Food Forests Grown With The Education Fund** was launched. With Citi's support, The Education Fund expanded the Edible Garden Initiative in all 51 schools, with 11 being transformed into Citi Gardens Food Forests Grown With The Education Fund. Not only are these food forests used in everyday lessons, they give students access to fresh produce in school and enough to share the harvest around their tables at home.

Results from 2015-2016

- 31,617+ students and families continue to be served in all of The Education Fund's Edible Garden Initiative schools (51 schools).
- 26,115+ harvest bags sent home with families served by Citi Gardens Food Forests Grown With The Education Fund.
- 410 harvest distribution events provided for families served by Citi Gardens Food Forests Grown With The Education Fund.
- 717 occasions showcasing produce in school cafeteria meals, with student promotion, across all of The Education Fund's Edible Gardens Initiative schools.
- 218 community engagement events held across all of The Education Fund's Edible Gardens Initiative schools ('builds', workshops, etc.), plus Citi Private Pass and Notable Chef events.
- 7,563 parents joined with their children at The Education Fund's Edible Gardens Initiative schools' events.
- 797 school visits by The Education Fund to Edible Garden Initiative schools.

Special thanks to

citi gardens
HEALTH FOUNDATION of south florida
Edible Garden Initiative Sponsors

Humana Foundation
IMPACT II Section Sponsor

Plant This, Not That!

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

Most edible gardens are based on annuals such as lettuce, carrots, and beets. This project, *Plant This, Not That,* focuses on perennial fruits and vegetables that grow on trees and bushes for a more permanent and productive school garden. Plants such as katuk, chaya, moringa, and edible hibiscus can be incorporated into existing gardens with little effort.

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

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

Supported by

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Edible Garden Initiative Sponsors

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HEALTH FOUNDATION of south florida

Eduardo Recinos
CNI Senior Program Manager
The Education Fund
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305-558-4544, ext. 119

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.

Staff

Eduardo Recinos has been a teacher since 2002 and has more than 20 years of experience growing edible gardens. He is a former lead teacher for The Education Fund's Edible Garden Initiative. Mr. Recinos has been recognized as an Environmental Role Model by Fairchild Tropical Botanic Garden and received recognition from the Alliance for a Healthier Generation as a Healthy Schools coach and role model. He is now the Senior Program Manager for The Education Fund's Edible Garden Initiative.

Materials & Resources

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

Standards

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.

Garden to Cafeteria

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

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

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

This project challenges students to be creative with their resources while encouraging them to focus on healthy eating habits. Students increase their consumption of fresh fruits and vegetables while learning mathematics and language arts skills!

Students

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

Staff

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

Materials & Resources

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

Standards

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

Supported by

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Edible Garden Initiative Sponsors

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HEALTH FOUNDATION of south Florida

Deborah LaBelle
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Assurant Cares.

In everything we do, we remember that people count on Assurant.

That's why we encourage our employees to volunteer in the communities where we work and live. We enhance their great works through the charitable giving programs of the Assurant Foundation.

We proudly salute the exceptional work, dedicated teachers and life-changing programs provided by The Education Fund.

ASSURANT®

www.assurant.com

Puppets Make Great Teachers

"Students reenact the text they read into a puppet show to teach other students the material."

Need a teacher? How about a puppet? Learning about core academic skills takes on a new slant with *Puppets Make Great Teachers*. This project is designed to teach low-performing students how to read grade level text. Students then convert the text into a puppet show to teach other students the material.

To begin the project, students are encouraged to choose a grade level story that is beneficial for them to read, one that they comprehend, and one that is appropriate to their reading level to enable them to practice their language arts skills. Once the students have a grasp on the story they have chosen, the visual arts component kicks in and they sketch out the characters. Selecting one character from the story, students create a puppet using felt, paper mâché, or recycled materials. Upon completion of their puppet, students use their writing skills to create a play that reenacts the story. Students are encouraged to share their play with family and friends, thus becoming teachers through the puppetry.

Implementing this type of cross-curricular strategy has shown positive results in behaviors and academic scores of students who struggle in reading and writing. Students need an outlet in life which allows them to express their love of art alongside their ever-growing knowledge base. This project allows them to do just that.

Students

Two hundred students, from grades 9 -12, participated in this project with a wide range of skill levels. The majority of the students were low-performing in academics and attendance. This project can be adapted to suit upper elementary and middle school students.

Staff

Anais Young began her teaching career in 2009 as a Fine Arts Teacher at Miami Central Senior High School. Ms. Young has made Central her home where she strives to make each and every student welcome in her art program. She has received numerous grants from The Education Fund, Donors Choose, FAWQC, KINF, and other programs.

Materials & Resources

Recommended materials include paper and pencils to sketch puppet template; paper mâché; newspaper; paint; brushes; string; scissors; felt; tapestry needles (blunt); embroidery thread; tacky glue, polyester fiber filling; and recycled materials such as old clothing, plastic cups, etc. Materials can be purchased through SchoolSpecialty.com at a discount for the school.

Resources include the school library, internet, and pictorial references.

Standards

English Language Arts

LAFS.910.SL.1.1: Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners.

LAFS.910.SL.1.2: Integrate multiple sources of information presented in diverse media or formats (e.g., visually, quantitatively, orally) evaluating the credibility and accuracy of each source.

Visual Art

VA.912.F.1.3: Demonstrate flexibility and adaptability throughout the innovation process to focus and re-focus on an idea, deliberately delaying closure to promote creative risk-taking.

Sponsored by

ASSURANT®

In remembrance of George Van Wyck, a founding member of The Education Fund, longtime executive of Assurant, and a man who believed in the power of teachers and education. We are grateful to Assurant Foundation for honoring Mr. Van Wyck and ALL teachers in Miami-Dade County.

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Principal: Gregory Bethune

Shakespeare Our Way!

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

"After reading a Shakespearean play, students demonstrate their comprehension of the text by working in groups to reenact their favorite scenes using a myriad of themes."

What if you imagined Julius Caesar as Lord Voldemort, or Darth Vader, or even simply as a cranky kindergartner? Well, that's what students can do with *Shakespeare Our Way!* It can sometimes be a struggle to get students interested in literature, especially when it is as rigorous as Shakespeare. But with this Shakespearean twist, students can transform their favorite scenes by working together to rewrite and act out Shakespeare's most famous scenes in cool themes such as Harry Potter, Star Wars, Hippies, Kindergarten, Hip-Hop, and more. Once scripts are typed up with new "lingo," rehearsals begin and students develop ideas for props, costumes, and backdrops all related to their theme. Finally, students perform the scenes in front of their peers in chronological order of the play. There is no better way to test students' comprehension of the text than by having them creatively demonstrate they understand it while also having fun!

This project benefits students academically by sparking their interest in Shakespeare, teaching them team work and communication skills, while also allowing them the opportunity to be artistically creative and expressive through their comprehension of the literature.

ASSURANT

In remembrance of George Van Wyck, a founding member of The Education Fund, longtime executive of Assurant, and a man who believed in the power of teachers and education. We are grateful to Assurant Foundation for honoring Mr. Van Wyck and ALL teachers in Miami-Dade County.

Griselis Reyes
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Hialeah Senior High
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Principal: Heriberto Sanchez

Students

Fifty students from 10th grade English Regular, Honors, and Gifted classes participated in this project. This project works best with larger classes as students will be placed in groups. Students met every other class as the school was on a block schedule. The entirety of the project was completed in 2-3 weeks. The project is easily adaptable to other grade/achievement levels.

Staff

Griselis Reyes has been a 10th grade English teacher for 11 years, teaching all achievement levels of Regular, Honors, and Gifted classes.

Her honors include 2005 Rookie Teacher of the Year; 2012-2015 recognition by the Florida Department of Education as one of the highest impact teachers in the state based on students' performance on statewide standardized assessments; and 2015 Teacher of the Year Nominee. Ms. Reyes has also received numerous grants from The Education Fund.

Materials & Resources

This project can be easily performed within the classroom. Materials needed include copies of Shakespeare's plays and arts and crafts supplies to create props, costumes, and backgrounds.

The internet can be a resource for researching ideas for props, costumes, background, and the diction needed to rewrite their script to fit a theme.

Standards

English Language Arts

LAFS.910.RL.2.4: Determine the meaning of words and phrases as they are used in the text.

LAFS.910.RL.3.7: Analyze the representation of a subject or a key scene in two different artistic mediums.

LAFS.910.RL.4.10: By the end of grade, read and comprehend literature, including stories, dramas, and poems, at the high end of the grades 9-10 text complexity band independently and proficiently.

LAFS.910.SL.1.1: Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners.

Spreading Friendship with Everglades Awareness

"Enjoying every aspect of their environmental project, students have become Friends of the Everglades."

"The Florida Everglades is not a worthless swamp," said Marjory Stoneman Douglas. That's the message that Redland Elementary School students have come to know is true. Through *Spreading Friendship with Everglades Awareness,* students learn about the Everglades, its history, and how they can help protect this valuable resource.

To begin the project, students raise money within the school to become official members of Friends of the Everglades, an organization founded by Marjory Stoneman Douglas in 1969. As funds are being collected, a whole host of activities designed to create awareness among students school-wide are implemented. Students draw murals and place them strategically around the school, and conduct research by using books and computers. A student dressed as Marjory Stoneman Douglas talks to students through the school's closed-circuit TV system. Guest speakers come to the school to speak with students.

The best features of this project include compassion for the environment and collaboration with other classmates. Students benefit academically with vocabulary development, enriched oral speaking skills, enhanced research skills, and reading comprehension.

Students

About 43 4th grade students in two classes participated in this project. The students worked 2-3 days a week in class and took assignments home. This project can easily be adapted to 3rd-5th grade students. Small group and total group lessons were used and vocabulary was used in daily conversations. Students practiced to speak about the Everglades on the school's announcements.

Staff

Sandra Bryant has taught in Miami-Dade County for 30 years. She has won the Returned Peace Corps Volunteer's Teacher Award twice and is a past Teacher of the Year at her school. A grant was awarded to her students to learn about sea turtles a few years ago, along with the other 4th grade classes at her school. Ms. Bryant has won monetary awards from Renaissance Learning and ReadQuest via Twitter.

Materials & Resources

A large work area is needed for creating the large murals. The friendship bracelets can be purchased through Amazon ($4.06 per 25). Recommended reading materials include *Celebrating Florida,* by Marion Dane Bauer; *Everglades,* by Jean Craghead George; *The Mangrove Tree, Planting Trees to Feed Families,* by Susan L. Roth and Cindy Trumbore; and *S is for Sunshine, A Florida Alphabet,* by Carol Crane. Other resources include everglades.org; the media center; guest speakers. Special programs through the National Park service provide free park admission to 4th grade students.

Standards

English Language Arts

LAFS.4.RI.1.1: Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.

LAFS.4.RI.3.7: Interpret information presented visually, orally, or quantitatively (e.g., in charts, graphs, diagrams, time lines, animations, or interactive elements on Web pages) and explain how the information contributes to an understanding of the text in which it appears.

LAFS.4.W.3.7: Conduct short research projects that build knowledge through investigation of different aspects of a topic.

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Redland Elementary
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305-247-8141
Principal: Adrian Montes

Souper Chefs!

"Students read fantastic food-themed stories and extend their understanding by cooking entrees drawn from those narratives."

Yes, there can be more than just one cook in the kitchen – just ask these *Souper Chefs!* To build independence skills for adulthood, mentally and physically challenged students read fantastic food-themed stories and extend their understanding by cooking entrees drawn from those narratives.

Beginning with stories such as *Strega Nona,* in which the students participate in the preparation and cooking process of making spaghetti, they move along to stories that incorporate mathematics and cooperative learning with the baking and division of chocolate chip cookies as in *The Doorbell Rang.* Kitchen safety is emphasized throughout the entire process. At the end of the project, each child takes home a literature-based cookbook to share with their family so they could can continue their culinary exploits.

Experience shows that students can have profound changes in attitude as a result of the combination of fantastic literature with cooking activities. They develop a new level of confidence, independence, and cooperation with family at home by duplicating what they have learned. The goal is to teach students proper food preparation and cooking skills to enable them to work in a hotel kitchen or other food preparation job in the future.

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Ellen Skidmore & Barbara Essinger
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Gulfstream Elementary
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305-235-6811
Principal: Yubeda Miah

Students

The class consisted of approximately 30 children with moderate physical and intellectual disabilities in grades 3-5 with developmental ranges from less than prekindergarten to second grade levels of understanding. They participated once a week for a semester and a half. This activity could be adapted to all grades K-12 but is especially effective with elementary aged children because the children's literature is geared more towards this age group. It can be used with small groups, larger groups, or whole classrooms using cooperative learning.

Staff

Ellen Skidmore has more than 22 years in the Miami-Dade Public Schools system. She has achieved National Board Certification working with Exceptional Education Students in 2000. Ms. Skidmore was named Teacher of the Year and a Region Six finalist for County Teacher of the Year in 2000.

Barbara Essinger has more than 28 years of experience as a teacher. She and Ms. Skidmore have written five adapter and/or innovator grants together.

Materials & Resources

Materials needed include books; a large table in front of the class and out of arms reach of any heating element, mixer, or waffle iron, or other kitchen equipment; easel or SMART Board; food items; and recipe book.

Other resources include the school cafeteria; a local celebrity chef to read a food based story (enriches the experience and might possibly make the local newspaper).

Standards

English Language Arts

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

LAFS.3.SL.2.6: Speak in complete sentences when appropriate to task and situation in order to provide requested detail or clarification.

Mathematics

MAFS.3.MD.1.2: Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l).

Badges of Honor

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

"Recognizing students not just for academic achievement but for personal qualities such as kindness, cooperation, and honesty creates a positive school culture and builds self-esteem."

School isn't all about academics. *Badges of Honor* is designed to create a school culture where students are motivated to make choices that contribute positively to the school community.

This character education project promotes good citizenship by encouraging students to demonstrate values that contribute to a positive school environment. Students are recognized for their positive actions and attributes with a "badge of honor" that they wear on their uniforms. The badges are created by students, using symbolism to communicate the attribute being recognized. Students nominate their peers for awards, selecting the attribute they believe the nominee should be recognized for, and providing a rationale that uses examples of how the nominee has demonstrated the attribute. Recognizing students not just for academic achievement but for personal qualities such as kindness, cooperation, and honesty creates a positive school culture and builds self-esteem.

Whereas many school awards focus solely on academic achievement, this program turns the focus away from grades. It is a highly flexible program that can be carried out within a single classroom over a short time frame or implemented school-wide over an entire school year and involve faculty, parents, and students.

Students

This project can be adapted for any age and ability level, and can be carried out within a single classroom or as a school-wide initiative. In secondary programs, it offers an opportunity for student groups such as the Student Council or National Honor Society to take a leadership role in promoting the project and distributing the awards.

Staff

Brigette Kinney has taught English Language and Literature and Design in an International Baccalaureate Middle Years Programme for seven years. She has been the recipient of numerous grants from The Education Fund and was a Disseminator at the 2014 IMPACT II Idea EXPO. Ms. Kinney implemented *Badges of Honor* with help from the National Junior Honor Society.

Materials & Resources

Materials needed for a single classroom include snap-together button kits and basic art supplies. For a school-wide program, a button-making machine and color printer. Prior to designing the badges, students participate in activities related to interpreting and using symbolism. Also needed is a nomination form which students, faculty, and parents can use to nominate a student for an award, and a certificate template that can be presented to award recipients along with the badges.

Miami-Dade County Public Schools has developed an entire curriculum differentiated by age group to support the "Values Matter" initiative, which can be used in conjunction with this project as character education lessons.

Standards

English Language Arts

LAFS.K12.R.3.7: Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words.

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

LAFS.K12.W.1.1: Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.

Sponsored by

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Ada Merritt K-8 Center
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305-326-0791
Principal: Carmen Garcia

Punctuation Station Grammar Board Game

"Students collaborate together and create an exciting, hands-on project that makes learning and reviewing grammar concepts an unforgettable experience."

Getting tired of students complaining about those grammar drills being boring or tedious? Need a fun and creative way to make grammar more memorable? You've come to the right place with *Punctuation Station Grammar Board Game* where students collaborate together and create an exciting, hands-on project that makes learning and reviewing grammar concepts an unforgettable experience.

In this project, students play in teams that are each assigned a type of grammar concept (i.e., apostrophes, commas, etc.) with each member taking a turn at rolling the die, moving on the board, and answering questions. Grammar questions are read aloud so everyone benefits from the review. The objective is to move through a store front mall, answer grammar questions and collect money, so that when all teams arrive at the center, the Punctuation Train Station, the team with the most money can buy the last ticket on the train, and thereby win the game!

With such a fun and engaging reinforcement of learned skills, assessment results are sure to be better than if typical worksheet drills are used. And if students need a refresher on those skills a few months later, bring out that student-completed board game again and play another round. The rewards of this project are tremendous for both students and teacher!

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Southwood Middle School
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305-251-5361
Principal: Raul Garcia

Students

Middle school class was divided into groups of three, although as many groups can be made as needed to reflect the skills necessary for review. Groups met multiple times per week to build their part of the project (storefront, cards, and game piece), and play the game for grammar review for the following week's grammar test. Any grade level can participate. Grammar skills can be adjusted to reflect the grade level.

Staff

Ileen Martin has taught English 6-12 for 10 years. She obtained her National Board Certification in English Language Arts/Early Adolescence in 2014 and is also certified in Gifted Education. She has taught all middle school grade levels, and all curriculum levels from Intensive or Inclusion to Gifted. Ms. Martin has used this project for three years and it does not require any volunteers for its implementation.

Materials & Resources

Materials needed include 8"x11" computer paper with blank board game paths pre-printed; index cards for creating questions cards; grammar textbook or resource so the students can copy the rules and create their grammar questions; coloring supplies; scissors; poster board; dice; and play money (or, use chocolate gold coins).

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

LAFS.K12.SL.1.1: Prepare for and participate effectively in a range of conversations and collaborations with diverse partners.

LAFS.8.SL.2.5: Integrate multimedia and visual displays into presentations to clarify information, strengthen claims and evidence, and add interest.

Parts of Speech Jeopardy

"Students take turns identifying the parts of speech assigned to a word taken from a sentence the teacher reads aloud."

Adjective? Noun? Verb? In *Parts of Speech Jeopardy,* students take turns identifying the parts of speech assigned to a word taken from a sentence the teacher reads aloud. This project, implemented in game form like the TV game show, provides an interesting alternative for reviewing the eight parts of speech assigned to a word according to its syntactic functions. In English, the main parts of speech are noun, pronoun, adjective, determiner, verb, adverb, preposition, conjunction, and interjection.

To make the "review" competitive, students are divided into two or more teams (depending on the number of students), each with a buzzer for answering. A scorekeeper manually keeps score on the whiteboard. For each question, the teacher reads a sentence two times, then one word from the sentence is chosen by the teacher and said aloud for the teams to identify. The first team to hit the buzzer and to say what part of speech the word belongs, earns a point for their team. The game continues until the teacher finishes reading 10-20 sentences. The team with the most points wins the game.

Through this review-based project, students solidify learning the parts of speech. It helps them achieve better scores on tests and improve their English language communication skills – all while having fun.

Students

This review-based project/game can be played with a handful or a classroom of students. It can be adapted to most ages, grades, and subjects.

Staff

Katherine Waddell has been teaching in Miami-Dade County Public Schools for 27 years. She taught Language Arts for 11 years and was nominated for Teacher of the Year during this time.

Ms. Waddell attained her Masters Degree from the University of Miami, and Educational Specialist Degree from NOVA Southeastern University.

She is currently a Media Specialist and has participated in and assisted with many Reading Programs throughout her career.

Ms. Waddell played *Parts of Speech Jeopardy* with her classes while she was a Language Arts teacher and her students thoroughly enjoyed it!

Materials & Resources

Materials needed include buzzers for each team or student and inexpensive prizes. This project can be played inside or outside of the classroom.

Standards

English Language Arts

LAFS.910.L.1.1: Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.

LAFS.910.L.1.2: Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.

LAFS.K12.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.K12.SL.1.3: Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric.

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School District Education Foundation Matching Grant Program

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Robert Morgan
Educational Center
Mail Code: 8911
305-253-9920
Principal: Reginald Fox

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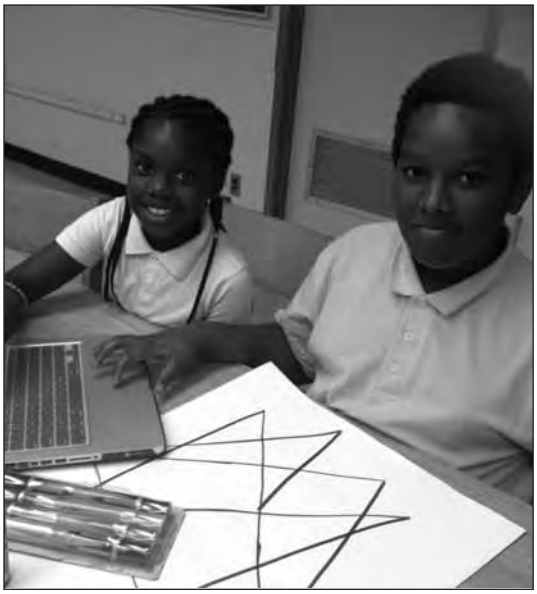
The Art of Robotics

"Students in the robotics club practice programming the LEGO MINDSTORMS EV3 robot by using it to draw creative art work."

Don't feel like drawing today? Ask your robot to do it! *The Art of Robotics* takes students and their MINDSTORMS EV3 robot to a new level in the robotics club by adding an art component. Already working with the EV3 robot, students sought other opportunities to expand on what they have already learned. Using their knowledge of robot programming, students implement a series of commands to make the EV3 robot create geometric shapes and patterns for them.



The purpose of this project is for students to practice programing the EV3 robot by using it to draw creative art work. To be successful, students design and build the EV3 with an attachment for a pen, practice programming on Carnegie Melon, use what they learn about programming to create geometric pictures, use colored pencils and markers to color in shapes, display the art, describe the various shapes in the pattern, and explain the programming code.

This variation in robotics takes a new approach to teaching Science, Technology, Engineering, Art, and Mathematics (STEAM). Not only does it give students more experience and familiarity with interacting with new technologies, it also affords them the opportunity to express themselves artistically in a new and challenging way.

Students

Thirty students in 3-5th grade with a wide range of academic abilities, including English Language Learners (ELL) and Special Education (SPED), participated in this project. Students met twice each week in the morning and sometimes after school on Wednesdays. The project can be adapted to any grade level. Middle and high school students can make more detailed pictures.

Staff

Marcelle Farley has been teaching for 22 years and has received several grants over the years. For the past two years, her students have been programming with the MINDSTORMS EV3 and each year has brought new discoveries and challenges. The SPED teacher helped on some days and some of the parents assisted with the groups.

Materials & Resources

Materials include MINDSTORMS EV3 robots and programming software. It's helpful to have more than one robot so each group has the opportunity to try their programming sequence. Carnegie Melon has free EV3 programming for teachers and students.

The Art of LEGO MINDSTORMS EV3 Programming, by Terry Griffin, and The LEGO MINDSTORMS *EV3 Discovery Book: A Beginner's Guide to Building and Programming Robots,* by Laurens Valk, will give students ideas for building.

Internet access is needed to participate in the online programming course. As students work in groups, parents/volunteers can help to debug programs.

Standards

Mathematics

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

MAFS.3.MD.4.8: Solve real world and mathematical problems involving perimeters of polygons.

Visual Art

VA.2.F.1.1: Use imagination to create unique artwork incorporating personal ideas and selected media.

VA.2.F.1.2: Explore the advantages of having multiple solutions to solve an artistic problem.

VA.3.C.1.1: Use the art-making process to develop ideas for self-expression.

VA.3.C.1.2: Reflect on and interpret works of art, using observation skills, prior knowledge, and experience.

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Lorah Park Elementary
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Principal: Maria LaCavalla

Building a Thriving Competitive Robotics Team

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

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

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

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

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Tandy Caraway
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Miami Killian Senior High
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305-271-3311
Principal: Magda R. Pereira

Students

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

Staff

Tandy Caraway has been a classroom teacher for more than 14 years. During her teaching tenure, Ms. Tandy has received many awards including being selected as Teacher of the Year at her school site, a National Honorable Mention for the American Board for Certification of Teacher Excellence, the Spot Success Award, and the recipient of a Teach and Inspire Fellowship. Ms. Caraway has garnered multiple grants: the Florida Learn & Serve pilot and renewal grants, the State Farm/University of Florida grant, the Sprint Character Education grant, and a Rookie FIRST grant.

Materials & Resources

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

Standards

English Language Arts

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

LAFS.K12.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.

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.

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

ELA and STEM Unite in a Bot World

"Utilizing cooperative learning skills, students create robots, compete against each other, and conduct scientific inquiry to analyze robot capabilities."

As our society becomes more progressive, it is important to educate students with the modern idea that many problems can be solved with technology. Students will be using robotics in so many aspects of their lives; therefore, it is essential that educators promote creative ideas and interest early. With *ELA and STEM Unite in Bot World,* cooperative learning skills are utilized as students create robots, compete against each other, and conduct scientific inquiry to analyze robot capabilities.

To begin the project, teachers instill interest by showing students robot competition videos (Discovery) during which students take notes and then retell the important information that was shown. Afterwards, students research a robot building team that participates in competitions and charts their progress. Next, a writing activity on the topic of Robot Inventions encourages students to come up with their own ideas for robots with the intention of solving a problem. They write about their robot ideas and illustrate their thoughts through story telling. Finally, cooperative learning groups each receive a robot kit aligned to their abilities. Once robots are built by all groups, students investigate what their individual robot's capabilities are and hold competitions.

Students

Normal class sizes of 18 can easily do this project. The writing aspect is part of any grade's curriculum. The kits can be very simple or very complex for students from grades 1-6, all levels of abilities. Students in this project had varying abilities, ranging from Gifted to ESE. Group sizes can be varied.

Staff

Jennifer Dibble has been a Miami-Dade County elementary school teacher of all subjects, grades 1-3, for 11 years. She has her Master's from the University of Florida in Curriculum and Instruction. Ms. Dibble has received many grants from The Education Fund.

Materials & Resources

Materials needed include Discovery Education videos about robotics competitions; paper; pencils; poster board to record the information gained from the videos; writing paper; colored pencils to do the writing aspect of the project; robotics kits; small screwdrivers; safety goggles; and old shoe boxes work well to keep parts from getting lost.

Resources include Discovery Education videos, *Scholastic* magazine articles and the following websites: flrobotics.org/ and roboticslearning.com/kids.html

Standards

English Language Arts

LAFS.4.RI.1.3: Explain events, procedures, ideas, or concepts in a historical, scientific, or technical text, including what happened and why, based on specific information in the text.

Science Standards

SC.3.N.1.1: Raise questions about the natural world, investigate them individually and in teams.

SC.3.N.1.2: Compare the observations made by different groups using the same tools and seek reasons to explain the differences across groups.

SC.3.N.1.3: Keep records as appropriate, such as pictorial, written, or simple charts and graphs, of investigations conducted.

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

iBot, uBot, We All Build Robots

Students ignite their creativity by building a robot using the LEGO elements, motors, and intelligent sensors included in the MINDSTORMS set.

Ready to engage, excite, and educate a classroom of middle school students? Look no further. The STEM-based project, *iBot, uBot, We All Build Robots,* meets the challenge of attracting and sustaining the interest of an entire class. LEGO MINDSTORMS EV3 offers 18 possible models students can build using their product. The software guides included enable learners to bring their robot to life with motors and sensors that add motion and behavior.

Students ignite their creativity by building a robot using the LEGO elements, motors, and intelligent sensors included in the set. They follow step-by- step building instructions to create robots that walk, talk, think and do whatever can be imagined. Students command by programing the robot in the intuitive icon-based programming interface. They drag and drop the actions into the programming window and adjust them to suit the robot's behavior.

Students use the Green City robotics challenge to build an energy efficient city and program robots to complete tasks such as powering a wind turbine. They make use of training mats, a challenge mat, and bricks to build a variety of green city models. Go and begin your iBot creation! Once built and programmed, it's time to play!

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Students

This project was designed for 50-75 eighth grade science students. The project is applicable for grades 6-12. For large groups, introduce the LEGO activities and concepts, then break the class into small groups and act as facilitator while students plan and construct individual robots.

Staff

For 11 years, Bridgit Coley has taught middle school science in Miami-Dade County Public Schools. Ms. Coley was named the 2004 Rookie Teacher of the Year for the school district. She was also nominated for the American Hero Award and has been the recipient of many grants from The Education Fund.

Bridgit Coley
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305-728-4622
Principal: Maria Torres

Materials & Resources

Materials needed for this project are the LEGO The Mindstorms NV3 kit ($399) available from LEGO MINDSTORMS on the LEGO website, LEGO The Green City ($200), computers in the classroom/computer lab/media center, and access to the internet.

Standards

Science

SC.8.N.1.1: Define a problem from the eighth grade curriculum using appropriate reference materials to support scientific understanding, plan and carry out scientific investigations of various types.

SC.8.N.1.2: Design and conduct a study using repeated trials and replication.

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

Marbles, Physics, and Coding: A Twist on F=MA

"Students and teachers embrace the fundamentals of coding and robotics in a physical first step."

Many teachers are hesitant to embrace robotics and computer programming/coding concepts because they are not comfortable with the nuances of the language. There remains a void in exposing students to physical problems and allowing them to think critically in order to move past obstacles. The purpose of *Marbles, Physics, and Coding: A Twist on F=MA* is to provide a non-threatening way for students and teachers to embrace the fundamentals of coding and robotics in a physical first step.

Before starting the project, each student is assigned a brief research task on coding - what it is, its applications, and what challenges a coder or programmer might face and how these challenges might be overcome. Then using Challenger and Cyclone Quadrilla kits, students collaborate to design and set up a marble run. Trials often culminate in failure, which requires revaluation and several subsequent trials to position and reposition pieces at various angles to provide the force and acceleration to complete each motion specific task. This is a great way to reinforce concepts of force and motion (F=MA) and physics while introducing the fundamental skills needed for programming/coding. It can be furthered by adding in components of robotic programming with additional materials from MINDSTORMS robots.

Students

One-hundred fifty middle school students in grades 6-8 participated in this project, meeting in block two-three times per week. The project can be simplified and adapted to lower grades and can be made more complex to adapt to high school.

Staff

Laurie Futterman has been teaching for 10 years and received many grants from The Ed Fund, FPL, and Verizon. She was region finalist for Teacher of the Year last year. Ms. Futterman writes a weekly column in the Miami Herald entitled, "Beyond the Classroom." It is the only regular column written by a teacher with a focus on school, students, and family. The project does not require assistants.

Materials & Resources

Materials needed include 2-3 Challenger and/or Cyclone Quadrilla kits (available on Amazon); folders/composition notebooks for journals; set up in stations; a brief PowerPoint that overviews basic concepts of coding and explains how problem solving skills and coding are intrinsically related; templates for various marble run tasks as well as several introductory force and motion activities. The internet is a good resource for research.

Standards

Science

SC.6.N.1.4: Discuss, compare, and negotiate methods used, results obtained, and explanations among groups of students conducting the same investigation.

SC.6.N.1.5: Recognize that science involves creativity, not just in designing experiments, but also in creating explanations that fit evidence.

SC.6.P.12.1: Measure and graph distance versus time for an object moving at a constant speed. Interpret this relationship.

SC.6.P.11.1: Explore the Law of Conservation of Energy by differentiating between potential and kinetic energy.

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SESSION A

(Indicate your preference by placing a 1st, 2nd and 3rd by your top choices in Session A)

___ELA and STEM Unite in Bot World (16-17) s, la, 2-7
Disseminator: Jennifer Dibble
As our society becomes more progressive, students will be using robotics in so many aspects of their lives. Utilizing cooperative learning skills, students create robots, compete against each other, and conduct scientific inquiry to analyze robot capabilities.

___Florida's Edible Aquifer (16-17) s, 6-8
Disseminator: Gwendolyn Foote
An engaging project where students create an edible model of an aquifer by layering items such as ice, food coloring with soda, ice cream, cereal, and candy sprinkles to simulate the action and function of aquifers and the process of water interaction with sediment. Students use science inquiry and labs to understand the concepts of Earth's structures and the integration of the water cycle with water as a natural resource.

___The Chemistry of Ocean Acidification (16-17) s, 9-12
Disseminator: Logan Johnson
This project ties a pressing, global event – ocean acidification – to a chemical phenomenon and help students understand how the study of chemistry explains and can help find a solution to what could be a catastrophic event. It also explores how changes in pH can affect plant and animal life.

___Enlarging Masterpieces – 2 BLOCK SESSION A & B (10-11) a, m, K-12
Disseminator: Michael Flaum
Learn to create and enlarge paintings, for murals, backdrops, wall decorations. Participants will create an enlargement at the workshop.

___Haikuing History (15-16) la, ss, 5-12
Disseminator: Michelle Singh
Haikuing 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.

___Hats Off To You! (15-16) m, 2-6
Disseminator: Ana Fullana
Students explore the world of Pi as a ratio and the relationships between different parts of a circle. In a hands-on activity, students create and design their own unique hat. This project is an innovative way to teach the meaning of circumference, as students will apply and solve problems in a real-world context involving Pi.

___I Want to Hold Your Hand (16-17) s, m, la, 6-8
Disseminator: Dr. Suzanne Banas
The goal of this project is to provide students with an understanding of new NASA missions and how they can contribute to them. Students construct a robotic-like hand and to demonstrate how data is collected when using robotic technology.

___iBot, uBot, We All Build Robots (14-15) s, 6-9
Disseminator: Bridgit Coley
Build your own robot using LEGO elements, motors, and intelligent sensors. Using the LEGO Mindstorm EV3, program your robot with intuitive icon-based programming interface. After adjusting behavior, it's time to play!

___iPublish Powerful Pop-Ups and Brilliant Brochures (13-14) t, regular, ESE, gifted, VE, K-12
Disseminator: Eugenio Gant
Use these fun, authentic hands-on tasks to reach the most reluctant learner. Students create pop-up books and travel brochures on Florida (or any topic you choose). Dynamic apps allow students to write, illustrate and animate a story, and publish online.

___LEGO: MoreToMath Than Meets the Eye (15-16) m, 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. When coupled with the current mathematics curriculum, the MoreToMath set successfully provides students with the visual/kinesthetic tools to reinforce and understand the latest Mathematics Common Core State Standards (CCSS).

___My Life in 2 Minutes (16-17) ss, la, 3-5
Disseminator: Sharon Geuther
If you were given two minutes to gather your most important possessions, what would you take? Students answer this question in an activity that immerses them into a true-to-life story that evokes emotion and encourages them to form a connection with their personal life and the events of the Holocaust. Through this project, students learn about the concentration camps of Auschwitz-Birkenau and how what few belongings the Jewish people had were taken from them when they arrived.

___Punctuation Station Grammar Board Game (16-17) la, 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 project that makes learning and reviewing grammar concepts an unforgettable experience.

___Reading Through Rhymes and Rhythms (01-02) la, mu, fl, esol, pre-K-2
Disseminator: Nancy Sale
Karaoke is used to help children with visual, aural, and language development.

___Shakespeare Our Way! (16-17) la, 9-12
Disseminator: Griselis Reyes
What if you imagined Julius Caesar 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' comprehension of the text than by having them creatively prove they understand it while also having fun!

___Souper Chefs! (16-17) la, m, ese, K-5
Disseminators: Ellen Skidmore and Barbara Essinger
Using stories with food themes, such as *Strega Nona* or *The Doorbell Rang,* students learn to correctly follow a recipe, measure ingredients, how to peel, chop, grate, blend, and mix ingredients to produce a delicious dish. At the end of the project, each child takes home a literature-based cookbook to share with their family to continue their culinary adventures.

Don't miss the 2016 Idea EXPO — The Teacher Conference!

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

___Teaching Trunks on the Holocaust (11-12) ss, la, a, K-12
Disseminators: Esther Sterental and Tom Glaser
Teaching Trunks from the Florida Holocaust Museum in St. Petersberg 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.

___Topo-Mapping the Space
(16-17) s, t, m, ss, 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.

___Transformations are Easier if the Force is with You (16-17) m, t, 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 their everyday life.

___Women History Lapbook Bio Report (16-17) ss, la, 5-8
Disseminator: Georgette Mondesire
This project provides the structure for students to view historical figures in a new and relevant way by incorporating social media tools that students are already familiar with. Based on their research, students create a report in either a digital or paper format, providing innovative opportunities for presentation.

The following Session A workshops are limited to teachers in CNI schools.

___Cooking in the Classroom m, la, i, K-5
Presenters: Lesley Thompett and Maren Roedenbeck
A great way to teach accross the curriculum! This presentation will share tools, tips, and techniques to manage healthy cooking activities with students. Learn simple recipes that are enthusiastically accepted by kids and how each one links to teaching standards. You will no longer need unhealthy classroom celebrations and candy incentives once you have mastered these skills!

___Garden Smoothies la, s, i, K-5
Presenter: Marie-Rose Denize
Feel like you are part of a live studio audience for the Food Network. The star of this workshop shows you how to create the perfect smoothie. Make and try different delicious smoothies using produce you can grow in your garden. Recipes will be provided.

___Garden to Cafeteria m, la, K-5
Presenters: Debi LaBelle & Audra Wright
This workshop provides an opportunity for cafeteria managers and teachers to plan together so that fresh, organic produce from the school garden can be included in the school lunch menu. Learn about procedures from the M-DCPS Department of Food and Nutrition, successful recipes, and how to overcome obstacles. Explore the new compostable plate properties and how to feed your school garden with lunch scraps. (Turn Food Waste to Good Taste is a reccomended follow up workshop)

___Learn & Label Your Plants la, s, i, K-5
Presenters: Gloria Parlade and Marcia Cardona
Paint, wood, metal, ceramic. It's time to roll up your sleeves to get hands-on and creative! Plant labels are an artistic learning opportunity for children. Discover how to improve your garden with labels that teach students about the plants.

___Turn Food Waste to Good Taste s, i, K-5
Presenter: Zarron Brown
Take a journey through the "S.T.E.M." of life with The Worm Whisperer! Wiggle and crawl through the depths of South Florida's ecosystem with a little help from his soil-mates. Learn how composting is bridging the gap between food waste and good taste, giving new life to old dirt, and creating a state of optimal balance for plant growth.

SESSION B

(Indicate your preference by placing a 1st, 2nd and 3rd by your top choices in Session B)

___A Toolbox for Teaching and Learning (14-15) cm, K-12
Disseminator: Eugenio Gant
The Toolbox for Teaching and Learning provides educators with a veritable toolkit of helpful tools (tips, strategies, and hands on activities) that will reshape the way students think and approach education. Organizational skills are improved and students will participate in engaging activities to promote ownership of their own learning.

___Animals in the Classroom
(13-14) i, s, K-12
Disseminator: Dr. Suzanne Banas
Learn how to manage animals in the classroom to use as teaching tools which provide a unique connection to science and the natural world. See examples of engaging projects such as the "Hamster-Powered Night Lite," and get tips on free and discounted ways to care and feed animals.

___Animated Androids: A Robot Challenge (13-14) s, t, K-12
Disseminator: Dr. Gwen Foote
This project uses LEGO Mindstorm robot kits, sound and light sensors, and wireless technology. Videos of students' creations are used to improve time, speed and function, and to mentor their peers. The robots are tested in a challenge course competition. Alternative energy add-on sets can be used to generate, store and use power from solar, wind, and water.

___Badges of Honor (16-17) la, pre-K-12
Disseminator: Brigette 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.

___Bulls, Bears, & Buckland: Financial Literacy for Millennials
(16-17) ss, m, 6-8
Disseminator: Daniel Buckland
The investment world comes alive for students as they create a simulated investment portfolio and become actively engaged in the process of real-life stock market exchanges. Exposed to the day to day activities of a long-term investor, students actively seek fundamentals of both companies and exchanges through real-time investment simulations.

___Grant Writing Workshop
Presenters: Lucy Petrey, Board Member The Education Fund and Zeny Ulloa, Past Grant Recipient
Practical advice on grant writing including Innovator Grants. Leave the workshop with an Adapter application almost complete!

___How Things Fly: Paper Airplanes
(15-16) s, m, K-6
Disseminator: Dr. Rossana Chiarella
This project teaches the fundamental principles of mathematics, 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.

___Learning A-Z la, 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 curriculum in your back pocket, filled with leveled and foundational books and lesson plans… already correlated to Reading Wonders and Florida LAFS Standards! Reading A-Z can help fill the gaps for teacher-led instruction of **phonics, vocabulary,** and **foundational reading skills.** Find out how to inspire kids to read more using any device and learn about ways to provide student accountability to your independent and small group reading blocks.

Every participant will enjoy a **free trial** to Learning A-Z's digital curriculum for Reading Language Arts and Science!

___Math Through Movement
(16-17) m, la, pre-K-5
Disseminator: Shereen Hale
2,156… Go! Bring excitement to learning in mathematics. Through a kinesthetic approach of using yoga mats, students direct their own learning while having fun. The students learn concepts that relate to telling time, fractions, coordinate planes, data analysis, counting, base ten numbers, and others in an engaging and interactive manner.

___Pompeii: Discovering Interdisciplinary Perspectives
(16-17) i, ss, s, a, 6-8
Disseminator: Mark Rosenkrantz
An in-depth study for students to learn about geology, art, history, and archaeology as it is connected to the historical context of the life, destruction, and preservation of the ancient Roman city of Pompeii. This innovative project combines different content area disciplines within a grade level, producing a curriculum that considers Pompeii as a central historical contextual focus for students to investigate.

___Puppets Make Great Teachers
(16-17) la, a, 9-12
Disseminator: Anais Young
Learning about core academic skills takes on a new slant with this project, designed to teach low-performing students how to read grade level text, take the material they have read, and convert it into a physical representation (a puppet show) from which a younger generation could learn.

___STEM Made SIMPLE (Sensible, Integrated, Meaningful, Purposeful Learning, & Engaging)
(16-17) s, m, K-5
Disseminator: Navia Gomez
Are you looking for ways to make STEM enjoyable and fun for your students while ensuring important concepts are being learned? Start with STEM Made SIMPLE for projects such as making a paper helicopter, a windmill, parachutes, a lunar lander, and a catapult. These hands-on activities will make teaching STEM exciting and further project/problem-based learning.

___Teaching Trunks on the Holocaust (11-12) ss, la, a, K-12
Disseminator: Esther Sterental and Tom Glaser
(Please see workshop description under Session A)

___Terrific Teaching Through Technology (13-14) la, t, K-5
Disseminator: Nancy Sale
Children are fascinated with storytelling. Adding technology motivates them even more! Using digital storytelling and iBooksAuthor, students collaborate to write about their edible garden infusing their book with iPad photos, embedded videos, live websites, music, and sound effects!

___Tiny House Off the Grid
(16-17) s, 6-8
Disseminator: Anne Daane
The concept of alternative living styles comes to life in this project as students use technology and resources to individually create a model home that incorporates real-life replicas of alternative energy sources, personal food production, and reduced personal footprint.

___**Trash to Treasure** (16-17) m, 5-7
Disseminator: Ana Fullana
This project creatively incorporates mathematics and communication skills. Students create an iMovie infomercial to sell an invention made from a recyclable item. To demonstrate their knowledge of percent of a number, students price their inventions and provide discounted pricing, showing savings and total discounts. Students also develop strategies to engage and convince the audience to purchase their creative invention.

Unmasking My Character
(15-16) la, 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.

What Do You Stand For? A Lesson in Character Education Inspired by the Holocaust (14-15) la, ss, 9-12
Disseminator: Michelle Singh
Increase student awareness and knowledge of history by providing a guide exposing them to the terrible tragedies that occurred during the Holocaust. After reading *Night* by Elie Wiesel and viewing films related to the Holocaust, students will write their own children's book in which the main characters exhibit valuable and positive qualities needed in society such as honesty, kindness, tolerance, patience, and respect.

The following Session B workshops are limited to teachers in CNI schools.

___**Cooking in the Classroom**
m, la, i, K-5
Disseminator: Lesley Thompett and Maren Roedenbeck
(Please see workshop description under Session A.)

___**Essential Oils and Infusions for Wellness** (16-17) s, m, 2-5
Disseminator: 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 coming from your student's herbal sachets? Welcome to the relaxing world of essential oils. Make teaching science stress free.

___**Garden Smoothies** la, s, i, K-5
Presenter: Marie-Rose Denize
(Please see workshop description under Session A.)

___**Grow This, Not That!** m, s, K-5
Disseminator: Eddie Recinos
Are you still growing boring grocery store vegetables in your garden? It's time to step it up and grow tropical and sub-tropical plants from around the world with minimal maintenance. Romaine not cutting it anymore? Add some Thai pepper leaf to your salad or sandwich. Get ready to discover a world of taste.

___**Learn & Label Your Plants** la, s, i, K-5
Presenters: Gloria Parlade and Marcia Cardona
(Please see workshop description under Session A.)

SESSION C

(Indicate your preference by placing a 1st, 2nd and 3rd by your top choices in Session C)

___**Ancient Egypt in Modern Miami**
(14-15) ss, m, 1-5
Disseminator: Katie Prelaz
Examine how inventions from ancient Egypt are a part of life today in modern Miami. Architecture, geography, politics, commerce, transportation, and culture are all explored with hands-on activities allowing students to create a collection of their own artifacts.

___**The Art of Fermentation** s, i, K-5
Presenter: Emiliano Camargo
Store your veggies in a healthy and creative way with basic skills for making simple, fermented products that can be done in the classroom. Make your own kimchee, coconut yogurt, and pickles while you learn about the heath benefits of fermentation and how it supports digestion and nutrient absorption.

___**The ART of Robotics**
(16-17) s, m, la, a, 3-12
Disseminator: Marcelle Farley
The ART of Robotics takes students and their LEGO Mindstorm EV3 robot to a new level by adding an art component. Students use a series of commands to program the robot to draw a various geometric shapes and patterns. Not only does this project give students more experience with interacting with new technologies, it also affords them the opportunity to express themselves artistically in a new and challenging way.

___**Bookmaking Bonanza** (11-12) la, 2-5
Disseminator: Eugenio Gant
Making their own books unleashes students' imagination and motivates them to develop reading and writing skills. Paper grocery sacks or paper plates become flip-up books or many other fun styles.

___**Butterfly Bonanza** (99-00) s, la, pre-K-6
Disseminator: Nancy Sale
An easy-to-create butterfly garden provides hands-on opportunities to study science, horticulture, and language arts.

___**Easy Plant Propagation** s, K-5
Presenter: Sam Chillaron
Starting or expanding a garden shouldn't be expensive. Learn how to grow new plants to drastically reduce the cost of fresh, organic produce. Speed up the process with vegetative propagation, grow large quatities with seed trays, learn about potting mixes, and more!

___**Essential Oils and Infusions for Wellness** (16-17) s, m, 2-5
Disseminator: Alena Sheriff
(Please see workshop description under Session B.)

___**Focus Reaction** (16-17) m, 1-5
Disseminator: James E. Williams Jr.
Disguising academic and physical fitness opportunities in a fun environment will guarantee immense learning and fun for students as they play Focus Reaction. It is a who-can-answer-first game that is designed to increase reaction time while using critical thinking skills to find the correct mathematic answers.

___**Garden Go - Salad Scavenger Hunt** s, i, K-5
Presenters: Jackie Kellog and Quentin Davis
You've heard of Pokemon Go. Now get your students to chase their vegetables. Students are naturally attracted to scavenger hunts so why not make a game out of creating a salad? A fun way to teach your students how to identify and eat their vegetables!

___**Garden Smoothies** la, s, i, K-5
Presenter: Marie-Rose Denize
(Please see workshop description under Session A.)

___**Give Me 5 and a Whole Lot More** (16-17) la, s, 6-12
Disseminator: Deborah Thomas-Hibbitt
This project educates students about the importance of keeping discarded plastics out of the landfills, the oceans, and the environment. Hands-on activities include learning about the different types of plastics; collecting, sorting, and learning the proper recycling procedures for each; implementing recycling plans for their own households; writing argumentative essays about environmental issues; designing awareness posters; and creating works of art out of the plastic.

___**Grant Writing Workshop,**
Presenters: Lucy Petrey, Board Member The Education Fund and Zeny Ulloa, Past Grant Recipient
Practical advice on grant writing including Innovator Grants. Leave the workshop with an Adapter application almost complete!

___**Marbles, Physics, & Coding: A Twist on F=MA** (16-17) s, 6-12
Disseminator: Laurie Futterman
This project introduces students to the fundamentals of coding and robotics in a physical first step. Students collaborate to design and set up a marble run by using Challenger and Cyclone Quadrilla kits. Students reevaluate and run subsequent trials to position and reposition pieces at angles to provide the force and acceleration to complete each motion specific task – A great way to reinforce concepts of force and motion (F=MxA) and physics while introducing the fundamental skills needed for coding/programming.

___**Monthly Money Matters**
(16-17) m, t, 6-8
Disseminator: Mariana Praschnik
Students develop a deeper understanding of financial literacy and budgeting through role playing, where students are assigned a specific profession and a yearly gross income amount. They calculate their net income and monthly budget and learn about the importance of saving, avoiding debt, having the knowledge to calculate taxes, and being fiscally responsible.

___**National Board Certified Teachers Information Session**
Disseminator: Kathy Pham
Receive tips and advice on the process of certification from the NBCT of Miami group.

___**Nature Buddies** (11-12) s, 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.

___**Parts of Speech Jeopardy!**
(16-17) la, 9-12
Disseminator: Katherine Waddell
Adjective? Noun? Verb? In Parts of Speech Jeopardy, students take turns identifying the parts of speech of a word taken from a sentence. This project, implemented in game form like the TV show, provides a fun and exciting way for reviewing the eight parts of speech assigned to a word according to its syntactic functions.

___**Read, Reuse, Recycle: Motivating Students to Read One Brush at a Time** (14-15) a, la, i, 6-12
Disseminator: Anais Young
Discover how to incorporate reading into art curriculum using the concepts of reading, reusing, and recycling. Using a book read in class, students use recycled paper and materials to create art projects reflecting the storyline of who, what, where, when, and how.

___**Running on Sunshine** (16-17) s, 6-8
Disseminator: Rosa Perez-Rubi
In this project, students are immersed in a problem-solving activity that requires them to make decisions balancing mobility, environmental, and economic needs. To do so, they learn about renewable and non-renewable energy sources and research alternative energy sources for the future. Students use their scientific know-how, creative thinking, and experimentation to work collaboratively to design and build high-performance solar electric cars.

___**See It In Print!** (14-15) la, t, 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 fiction: short story, fiction, non-ficition, and poetry.

___**A Senior's Senior Prom**
(10-11) i, a, m, 7-12
Disseminator: Michelle Singh
Students plan, organize, and stage a prom at an assisted-living center, staging everything from music, makeup, photography, multimedia, and awards.

___**Spreading Friendship With Everglades Awareness** (16-17) la, 3-5
Disseminator: Sandra Bryant
Through this project, students discover the importance of the Florida Everglades, its history, and how they can help protect this valuable resource. Students participate in a host of activities designed to create school-wide awareness, such as creating murals, conducting research, listening to guest speakers, and

raising money to become official members of Friends of the Everglades, an organization founded by Marjory Stoneman Douglas.

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

___Teaching Trunks on the Holocaust
(11-12) ss, la, a, K-12
Disseminator: Esther Sterental and Tom Glaser
(Please see workshop description under Session A.)

___To Borrow or Not: Financing a College Education (16-17) ss, m, a, 6-12
Disseminator: Tandy Caraway
In this project, students explore their college options from a financial perspective and demonstrate mastery of financial literacy concepts through a scrapbook. An example of a scrapbook page can be the comparison of the cost of attendance at different colleges, calculating budgets that include expenses specific to each college, and taking into account geographical location factors such as cost of living and traveling home.

___WOW - Watching Our Weather
(12-13) s, t, 5-9
Disseminator: Dr. Gwen Foote
In this student inquiry project of lab activities and simulations, students assemble a portable weather station to monitor data through real time and prepare weather forecasts. Using a Galaxy Tablet, students can download apps to easily submit reports to the school website and local weather stations.

SESSION D

(Indicate your preference by placing a 1st, 2nd and 3rd by your top choices in Session D)

___The Art of Fermentation s, i, K-5
Disseminator: Emiliano Camargo
(Please see workshop description under Session C.)

___Bank It! (15-16) m, ss, 6-12
Disseminator: La-Shanda West
This project aims to provide students with the tools and knowledge to make wise financial choices. Students gain experience 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.

___Bringing Historical Figures to Life (15-16) la, ss, K-8
Disseminator: Gloria Plaza
Students research famous figures featured in the *Who Was?* book series and bring them to life though videos, pictures, websites, or costumes at a culminating event. Students also have an opportunity to master language arts skills by writing a biography about a family member or a friend while following the structure of these books.

___Building a Thriving Competitive Robotics Team (15-16) m, s, la, 9-12
Disseminator: Tandy Caraway
A step-by-step guide on how to build and maintain a thriving competitive robotics team, including team roles, fundraising ideas, team resources, and robot design tips. This project will help students develop problem-solving, teamwork, and 21st century skills.

___Building Bridges (13-14) s, 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.

___Come CODE With Me
(15-16) t, m, K-12
Disseminator: Nancy Sale
Boost students' self-confidence as they problem-solve. This project contains self-guided and self-paced tutorials that have programming and instructions to enable students to explore and practice algorithmic thinking by playing games.

___Easy Plant Propagation s, K-5
Presenter: Sam Chillaron
(Please see workshop description under Session C.)

___ELEMENTary (15-16) s, la, 4-6
Disseminator: Maria Aluma
Teach students a new way to learn the periodic table as they research and create a chart that includes all the elements in the table that can be found in their body. Students also explore the elements found in the foods that they eat.

___Essential Oils and Infusions for Wellness (16-17) s, m, 2-5
Disseminator: Alena Sheriff
(Please see workshop description under Session B.)

___Garden Go - Salad Scavenger Hunt s, i, K-5
Presenters: Jackie Kellog and Quentin Davis
(Please see workshop description under Session C.)

___Garden Smoothies la, s, i, K-5
Presenter: Marie-Rose Denize
(Please see workshop description under Session A.)

___Google Earth: Using it in the Classroom (13-14) i, 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!

___Grant Writing Workshop,
Presenters: Lucy Petrey, Board Member The Education Fund and Zeny Ulloa, Past Grant Recipient
Practical advice on grant writing including Innovator Grants. Leave the workshop with an Adapter application almost complete!

___Help! My Fairy Tale Has Been Fractured! (15-16) la, pre-K-5
Disseminator: Lisa Braye
Using a familiar fairy tale as a starting point, students write their own fairy tale by changing the setting, point of view, characters, and/or plot. By learning to identify different elements of a story, and being able to compare and contrast different versions of a story, students start building a strong writing foundation. Students then share their "fractured" fairy tale with their peers through a puppet performance.

___Hot Crystals Cool Outcomes
(15-16) s, 5-9
Disseminator: Laurie Futterman
Are you ready to rock? Through the use of rock samples and salol crystals (phenyl salicylate), students liquefy crystals and analyze the impact of cooling rates on crystal formation. By examining the crystals, students employ analysis, drawing, collaboration, and critical thinking.

___Icky Ichthyology (09-10) s, 6-8
Disseminator: Dr. Gwen Foote
Students use a salt-water aquarium as a marine lab for observation and inquiry. They create energy pyramids, study marine biomes, and investigate conservation organizations.

___Literature Exposition Day
(09-10) la, 9-12
Disseminator: Michelle Singh
Students interview family members about the literary voices that represent their own cultural backgrounds or ethnic groups and represent that author in costume at the school expo.

___NASCAR Pasta Challenge: The Science Behind NASCAR Racing
(15-16) s, m, la, 5-10
Disseminators: Ana Lissette Casanova and Rosa Perez-Rubi
Students learn about the physical science concepts of force and motion through stock car racing by designing, building, and testing their model cars out of pasta.

___Stop, Animate, & Learn!
(14-15) la, ss, s, K-12
Disseminator: Wendy Gerry
Students become stop-motion animation artists as they utilize videos to learn concepts in any content area. Students acquire skills to research a topic, develop a detailed story board and script, then use a webcam or iPad set up with a stop-motion program to film and narrate their video.

___Teaching Trunks on the Holocaust
(11-12) ss, la, a, K-12
Disseminator: Esther Sterental and Tom Glaser
(Please see workshop description under Session A.)

___Turn Food Waste to Good Taste
s, i, K-5
Disseminator: Zarron Brown
(Please see workshop description under Session A.)

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The Chemistry of Ocean Acidification

"Learning about ocean acidification helps students understand how the study of chemistry explains, and can help find a solution to, what could be a catastrophic failure for humankind."

The world's oceans are becoming more acidic with each passing day - that's not good news. This project, *The Chemistry of Ocean Acidification,* is designed to tie a pressing, global event - ocean acidification - to a chemical phenomenon and help students understand how the study of chemistry explains, and can help find a solution to, what could be a catastrophic failure for humankind.

This project begins in our own backyard of Miami with the beach and the pH scale. It isn't long before students are immersed into pertinent aspects of chemistry, discussing hydrogen ions, carbonate ions, weak acids and bases, and buffers. Once students begin to understand the chemistry, they start to develop a research question and a multiday lab around it. Many choose to see how increases in pH affect plant life, how shells are affected by an increase or decrease in pH, and what happens to the pH when pollutants are added to an ocean-like environment. They are free to formulate their own ideas. At the end, students are required to research and write a formal lab report using the Lab Report format. They use primary research and extrapolate their own ideas on what might occur in the future.

Many students lack awareness of global issues and this project is designed to facilitate understanding the chemistry of a complex problem. Environmental education must be prioritized for today's students, and integrating it into standing curriculum is the best way to do to it and keep lessons up to date.

Sponsored by

School District Education Foundation Matching Grant Program

Logan Johnson
ljohnson@materacademy.com
Mater Academy Charter High School
305-828-1886
Principal: Judith Marty

Students

Approximately 120 Honors, Gifted, and AP program students participated in this unit, meeting every other day, though some students come in to check data on days that they did not meet. This project could easily be adapted to elementary or regular students by talking about acids and bases and not having it be an abstract concept. If students learn about acidity without mathematics, students could see how pH affects the biological systems affected by our actions. Teachers could also alter this unit to teach logarithms.

Staff

Logan Johnson is a second year teacher completing a Fellowship with the NSTA. She used this project two years in a row, once with her honors and gifted students and once with her AP students. No assistance is needed to implement it in the classroom.

Materials & Resources

This project can be used with limited space. Needed items include several gallons of seawater; buckets of sand; Phenophalein or an universal indicator is required in larger amounts; several large beakers; a strong acid; a strong base; and other basic items. Students can provide items like shells, plants, chicken bones, and containers for their self-designed lab. Access to a computer lab is needed. Students completed most of their research at home, though one day was spent at the library for the datainteclassroom.org research project.

Standards

Mathematics

MAFS.912.N-Q.1.1: Use units as a way to understand problems and to guide the solution of multi-step problems.

MAFS.912.N-Q.1.2: Define appropriate quantities for the purpose of descriptive modeling.

Science

SC.912.P.8.8: Characterize types of chemical reactions, for example: redox, acid-base, synthesis, and single and double replacement reactions.

SC.912.N.1.4: Identify sources of information and assess their reliability according to the strict standards of scientific investigation.

Essential Oils and Infusions for Wellness

"Students learn mathematics and science by making essential oil sachets to increase motivation, promote academic focus, boost energy levels, and encourage positive classroom behavior."

Stress and anxiety meet aroma therapy head-on as students use essential oils to battle the concern and panic that often accompany high-stakes testing. Modern neurobiology has demonstrated that the ability to learn is reduced when the brain is experiencing stress or anxiety. Studies report that smelling certain essential oils can reduce feelings of anxiety. In this project, *Essential Oils and Infusions for Wellness,* students learn the science behind plants and essential oils while relieving anxiety and improving their testing experience in the process.

Students learn mathematics and science by making essential oil sachets to increase motivation, promote academic focus, boost energy levels, and encourage positive classroom behavior. Students learn how plants are distilled using steam to extract the essential oils and they are shown bottled store bought essential oils, giving them a better understanding of how the oils were made from a plant. Students then visit the school's garden to gather, organize, and label a variety of aromatic leaves. As students become aware of the purpose of essential oils, they work as a team to create their essential oil sachets.

This project contributes to a positive learning environment for students by providing them with opportunities to study the senses and build their sensory processing skills while using scientific inquiry that produces learning gains in their mathematics and reading assessments.

Students

Nineteen third grade students ranging from low-to-moderate academic performance (ESOL levels 2-5, non-readers, low socio-economic background, and learning disabilities) participated in this project. This project can be adapted to grade levels 2nd-5th and the meeting times can vary from once to twice a week for an hour with a class size of 25.

Staff

Alena Sheriff is a K-3rd grade teacher, working as an educator for 20 years. This is her second IMPACT II experience with grant writing. Ms. Sheriff was selected as Teacher of the Year for the second time in 2015 and has received the award for National Board Certification. Additional awards and honors include a Fairchild Challenge Garden Grant; CNI Garden grant; Common Threads Grant and after school cooking program; and numerous grants from The Education Fund.

Materials & Resources

This project can be done inside or outside the classroom – outside is best and in the school garden if there is one. Each oil has a special purpose. Oils to wake up a sleepy class: grapefruit, lemon, wild orange, peppermint. Oils to increase focus and concentration: wild orange, peppermint, frankincense, rosemary. Oils to help students calm down: citrus bliss, lavender. Oils to improve behavior: lime, ylang ylang, grapefruit, wild orange. (Make sure oils are certified pure therapeutic grade such as doTerra Essential Oils' In Tune Focus Blend.) One pound of each of the following dried lavender flowers, dried rose petals, dried calendula petals, 50 sachets bags – all acquired from Amazon online.

Standards

Mathematics

MAFS.3.MD.1.2: Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l).

MAFS.3.MD.2.3: Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories.

Science

SC.3.L.15.2: Classify flowering and nonflowering plants into major groups according to their physical characteristics.

SC.3.N.3.1: Recognize that words in science can have different or more specific meanings than their use in everyday language; for example, energy, cell, heat/cold, and evidence.

Sponsored by

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305-822-0770
Principal: Ivette Bernal-Pino

Florida's Edible Aquifer

"Students create an edible model of an aquifer and have fun sharing it with classmates."

Where do we get our water supply? This is a concept that many students do not understand. With *Florida's Edible Aquifer,* students use science inquiry and labs to understand the concepts of Earth's structures and the integration of the water cycle with water as a natural resource. They simulate the action and function of active aquifers and the process of water interaction with sediment.

This is a fun and engaging project that teachers and students enjoy. Students create an edible model of an aquifer and have fun sharing it with classmates. Layers in a transparent cup such as ice, food coloring with Ginger Ale, ice cream, cereal, and two different shades of sprinkles are used to simulate the depth of the ground and the water that lies beneath. Labs include water quality activities, watershed models, and analysis of water as a state of matter with its properties and characteristics. The model shows how filtering and liquefying factors combined with simulated pollution, sediment, and particles can impact the fresh water supply.

Students also learn about research and design in engineering a product as entrepreneurs. They learn about "Green" careers that promote healthy lifestyles and water/energy conservation. This is a fun and engaging project about an issue that is critical in real-life and it is assessed annually.

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School District Education Foundation Matching Grant Program

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Nautilus Middle School
Mail Code: 6545
305-532-3481
Principal: Rene Bellmas

Students

Students in grades 6-8 participated in this project. It can be done in large groups with demonstration or collaboration of smaller groups to compare through demonstrations. All students can participate in this project, varying in abilities to create, sample and evaluate, and discuss the CER (Claim-Evidence- Reasoning).

Staff

Gwendolyn Foote and participating teachers have been working in gardening techniques using water conservation with watershed models to use the available water and water runoff for growing their plants. They have received grants in the past from Dream in Green, Fairchild Challenge, and the City of Miami Beach.

Materials & Resources

Project materials needed include posters; markers; tape; a blender; fruit; specimens of garden products; measuring containers; rubber sealing containers; watershed model and mapping supplies; and USB drives.

Resources include field trips to Miami Dade College North Campus and Fairchild Tropical Botanic Garden; and in-school presentations of Dream in Green's WE-LAB, with a free toolkit given to participants, and from the Water and Sewer Department of Miami (WASD).

Online resources include floridaswater.com; nsta.org; azscience.org and pbslearningmedia.org – to name a few.

Standards

Science

SC.6.E.6.1: Describe and give examples of ways in which Earth's surface is built up and torn down by physical and chemical weathering, erosion, and deposition.

SC.6.E.6.2: Recognize that there are a variety of different landforms on Earth's surface such as coastlines, dunes, rivers, mountains, glaciers, deltas, and lakes and relate these landforms as they apply to Florida.

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

Focus Reaction

"Students' mathematic knowledge is put to the test with a vision search worth the challenge."

Disguising academic and physical fitness opportunities in a fun environment will guarantee immense learning and fun for students as they play *Focus Reaction*®. It is a who-can-answer-first game that is designed to increase reaction time while using critical thinking skills to find the correct answers. Presented in more than 20 schools, youth agencies, and community events involving over 1,000 Florida students during the 2008-2016 school years, it is a physical education/mathematics enrichment program designed to increase performance in physical fitness and mathematics.

Focus Reaction® puts students' mathematic knowledge to the test with a vision search worth the challenge. The premise behind this project is for teams to use their critical thinking skills to find the correct equations to the given answer (example: Multiplication - Select two numbers whose product total 28). The objective of the game is to be the first player to correctly place his or her game piece on the correct number, letter, or equation. The successful player will earn a point for their team. Pressing the game buzzer first, coupled with the large format and richly-colored printed game boards, are the interest-grabbing features of the game. Using students' physical education class for mathematics enrichment makes this project innovative.

Students

Participants were mainly in grades 2 and 3, ranging from 7-11 years. Approximately 500 students participated in the program during physical education class at least twice a week and it accommodated students of varying achievement levels. The project is designed to adapt to other ages and grades as well.

Staff

James Eddie Williams Jr. (Coach Williams), a 20 year veteran teacher, is recognized and respected as an entrepreneur, inventor, and Health and Physical Educator. He earned a Bachelor's Degree in Health and Physical Education from Bethune-Cookman University (B-CU) in Daytona Beach, Florida in 1995, where he was honored as the Most Outstanding Math Student 1993-1994, earning a near perfect score on the math portion of the College-Level Academic Skills Test.

Materials & Resources

Materials needed include two 26x40 table games with illustrated vinyl artwork or one 4x6 white board with illustrated vinyl artwork attachment; 24 magnetic games pieces; four fitness dice pairs; two game buzzers; and blank cards to create mathematic flash cards that suit your lesson.

Standards

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.4.1: Model with mathematics.

MAFS.3.OA.1.3: Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.

Physical Education

PE.2.L.3.5: Set and meet physical-activity goals.

PE.2.L.4.2: Discuss the components of health-related physical fitness.

Sponsored by

School District Education Foundation Matching Grant Program

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305-636-3480
Principal: Adrena Williams

Give Me 5 and a Whole Lot More

"Students become significantly aware of the damage done to the environment from discarded plastics."

Want to help preserve our environment? Get on the plastic recycling bandwagon – and stay on! That's what students are doing in a project called *Give Me 5 and a Whole Lot More,* where environmental issues and plastic refuse are the main focus. Over four years, participating students have collected more than 40,000 pieces of plastic. Then the students recycled, upcycled, and reused the plastic in a variety of ways.

This project educates students about the importance of keeping discarded plastics out of the landfills, the oceans, and the environment. They learn about the different types of plastics, numbers 1-7; they collect, sort, and learn the proper recycling procedures for each; they implement recycling plans for their own households; they write argumentative essays about environmental issues, many of which are tied to discarded refuse-like plastics; they transfer these ideas to posters which are displayed for the entire school. Plus, they create works of art out of the plastic to visually replicate the idea that much of the environment is being affected by plastic waste.

From collecting, sorting, and re-purposing pieces of "clean scrap," students have become significantly aware of the damage done to the environment from discarded plastics. This project fosters awareness of the environment, the need to preserve resources, sustainability, responsibility, improved writing scores, creativity, collaboration, and having fun while learning.

Sponsored by

Deborah Thomas-Hibbitt
dhibbitt@dadeschools.net
TERRA Environmental Research Institute
Mail Code: 7029
305-412-5800
Principal: Jose L. Sirven

Students

A total of 181 (9th grade gifted English classes) participated in this project. We began the project on the first day of school with a clever "getting to know you" activity involving the different plastic polymers, collected the plastic throughout the school year, continued with the essays and preparation for the FLA writing test in January and February, culminating in the display of all work during the month of April and the celebration of Earth Day. This activity can most certainly be adapted for all ages and grades and used with any size group.

Staff

Deborah Thomas-Hibbitt has taught in the Miami-Dade County Public Schools system for 35 years. In 2001, she was the Region 3 Teacher of the Year and the runner-up for Miami-Dade County Teacher of the Year. Ms. Thomas-Hibbitt has received honorable mention for work done with her students for The Fairchild Challenge and Preserve, a recycling company.

Materials & Resources

Materials needed include storage bins, poster boards or paper, scissors, glue guns, glue, double-sided tape, duct tape, spray paint, large plastic recycle bins, fishing line, and ceiling clips.

Online resources include a variety of Ted Talks on the environment, YouTube videos on the gyros in the ocean composed of discarded plastic, The Story of Stuff Project, The Story of Solutions, and The Story of Bottled Water. Parents are a huge resource who can help with the collection and proper recycling of the plastic.

Standards

Science

SC.912.N.1.6: Describe how scientific inferences are drawn from scientific observations and provide examples from the content being studied.

SC.912.N.1.7: Recognize the role of creativity in constructing scientific questions, methods and explanations.

English Language Arts

LAFS.910.SL.2.4: Present information, findings, and supporting evidence clearly, concisely, and logically such that listeners can follow the line of reasoning and the organization, development, substance, and style are appropriate to purpose, audience, and task.

I Want to Hold Your Hand

"Students construct a robotic-like hand and demonstrate how data is collected when using robotic technology."

In *I Want to Hold Your Hand,* the goal is to provide students with an understanding of new NASA missions and how they can contribute to them. Real-world issues such as how to guide an asteroid into our moon's orbit is presented to students with the hope that students will tackle the dilemma head-on and develop the inspiration in the future to become scientists, specializing in the required technology and participating when the scheduled event happens in 2026.

In this project, students construct a robotic-like hand and demonstrate how data is collected using robotic technology. Initially, they are given a problem to solve: Can you design and build a robotic hand and move an asteroid? Students learn that NASA is developing a first-ever robotic mission, called the Asteroid Redirect Mission, to visit a large near-Earth asteroid, from which a multi-ton boulder will be collected from its surface through an enhanced gravity tractor asteroid deflection demonstration. A NASA spacecraft will then redirect the multi-ton boulder into a stable orbit around the moon, where astronauts will explore it and return with samples in the mid-2020s. The main objective is to develop the required technology to bring a small near-Earth asteroid into lunar orbit. There, it could be analyzed by the crew of the Orion EM-3 mission in 2026. After the introduction, students redesign their robotic hand to pick up and move their asteroid, styrofoam ball.

Students

All levels of 6th and 7th grade students participated in this project, doing it to varying degrees. Some working in groups and some individually.

Staff

Suzanne Banas is a National Board Certified teacher, with a Ph.D. in Science Curriculum/ Educational Leadership. For 15 years, Dr. Banas has taught middle school science in Miami-Dade County Public Schools. Since 2003, she has been an adjunct professor at Miami Dade College for the Education department. Her recent publications include "Emerging Young Investigators" (Harvard Press) and "The Florida Science Teacher" (Publishing Student Research Spring 2014). Dr. Banas' honors include the Presidential Innovation Award for Environmental Educators Honorable Mention/Finalist 2014 and the Microsoft U.S. Innovative Education Finalist 2011.

Materials & Resources

Materials needed for a team of up to three include narrow rubber bands; drinking straws; cardboard; tape; scissors; nylon cord; centimeter ruler; and pen.

Online resources include http://www.nasa.gov/audience/foreducators/topnav/materials/listbytype/I_Want_to_Hold_Your_Hand.html

Standards

Science

SC.4.N.1.8: Recognize that science involves creativity in designing experiments.

SC.912.E.5.7: Relate the history of and explain the justification for future space exploration and continuing technology development.

SC.912.E.5.9: Analyze the broad effects of space exploration on the economy and culture of Florida.

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.

Sponsored by

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South Miami Middle School
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305-661-3481
Principal: Juan C. Boue

Math Through Movement

"A kinesthetic approach, using yoga mats, allows math students to direct their own learning while having fun."

2,156….Go! The purpose of *Math Through Movement* is to bring excitement to learning in mathematics. Through a kinesthetic approach using yoga mats, students direct their own learning while having fun. The students learn concepts that relate to telling time, fractions, coordinate planes, data analysis, counting, base ten numbers, and others in an engaging and interactive manner.

One example of an activity involves learning the various forms of numbers - standard notation, expanded form, and word form. Four students each roll a die. The numbers, such as 1, 2, 3, 4, are arranged in any order, like greatest to least, or vice versa. Students then use base 10 blocks to model the number. After they model the number, they place the corresponding base 10 blocks on the yoga mat. Then they have to determine the expanded form or word form of the number and express them using other mathematic manipulatives on the mats.

This project is fun and engaging for students, easy to implement, and requires little preparation time. Since it can be used for a variety of tough mathematic concepts, teachers need to be imaginative in the implementation of activities. It would assuage students' dislikes or fear of mathematics and provide motivation to those who struggle in the area of mathematics learning.

Sponsored by

School District Education Foundation Matching Grant Program

Shereen Hale
sherewal@dadeschools.net
Norwood Elementary
Mail Code: 4001
305-653-0068
Principal: Dr. Kevin Williams

Students

The program is adaptable to a broad range of students, from as early as grades Pre-K up to grade 5. Students would be able to use this during differentiated instruction, recess, and even during Physical Education classes. Students can crawl, hop, walk, skip, stretch, while working on basic or foundational mathematics skills and be engaged while doing so.

Staff

Shereen Hale has been a teacher since 2003, and has worked with Exceptional Students with disabilities and Gifted students. The project was used one time, during a Family Night. There were more than 250 parents, guardians, and students who participated in the event. Other teachers, paraprofessionals, and individuals volunteered in the project, lasting approximately two hours.

Materials & Resources

Materials needed for this project are hop mats for the following concepts: fractions/decimals/percent; equivalent fractions; multiplication; addition/subtraction; 100 number grid; skip counting; place value; money; factors; multiples; coordinates; and squares. Additional resources include Math and Movement workbooks and guide books.

Standards

Mathematics

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

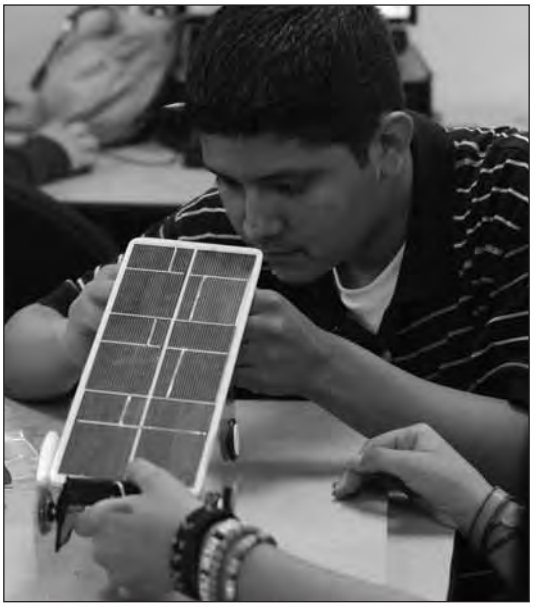
MAFS.2.NBT.1.1: Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones.

MAFS.2.NBT.1.3: Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.

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

Running on Sunshine

"Students are taught renewable and non-renewable energy sources and are encouraged to research alternative energy sources for the future."



Alert! Transportation in the United States is expected to change radically in response to environmental constraints, fluctuating oil availability, and unstable economic factors. The transportation systems that emerge in the 21st century will be defined largely by the choices, skills, and imagination of today's youth. *Running on Sunshine* will get students involved and guide them in the direction of building and planning for a better tomorrow - using the natural resources we have to improve our way of living.

In this project, students are immersed in a serious problem-solving activity that requires them to make decisions balancing mobility, environmental, and economic needs. To do so, they are taught renewable and non-renewable energy sources and are encouraged to research alternative energy sources for the future. Throughout this process that involves much trial and error, students use their learned scientific know-how, creative thinking, experimentation, and cooperative learning skills to come up with one solution to the problem. They work together in teams of two to three to design, build and race a solar electric vehicle. These student scientists and engineers learns the value of hands-on teamwork in designing and building a high-performance solar electric vehicle.

Students

The students participating in the project were 7th graders. This can be adapted to other grade levels.

Staff

Rosa Perez-Rubi has been teaching at Miami Arts Studio for the past eight years as a general science and physical science teacher. She has devoted her time as Science Department Chair, EESAC Member, Odyssey of the Mind Coach, Fairchild Challenge Liaison, SECME Coordinator, and members of the Science Club, Robotics, Garden Club, and PTSA. Ms. Perez-Rubi participated as SECME Judge (2013-2015), and was a Disseminator and grant recipient for The Education Fund's Idea Expo (2013, 2014, and 2015) and FAST (Florida Association Science Teachers) Presenter 2015.

Materials & Resources

Materials needed include Junior Solar Sprint Kits ($23.99 each) and black butcher paper to place as runway for vehicles. Helpful reference books include *Finding Out About Solar Energy, What Are Energy Sources?* (Searchlight Book), by Matt Doede; *Energy from the Sun: Solar Power* (Next Generation Energy), by James Bow; *Renewable Energy Sources* (Sci-Hi: Earth and Space Science), by Andrew Solway; *Solar Energy,* by Rose Lewis; *Sun Power: A Book about Renewable Energy* (Earth Matters), by Esther Porter; and *Energy from the Sun: Solar Power* (Power: Yesterday, Today, Tomorrow), by Ruth Owen. Other resources the internet; the public library and speakers from FPL.

Standards

Science

SC.7.N.1.1: Define a problem from the seventh grade curriculum, use appropriate reference materials to support scientific understanding, plan and carry out scientific investigation of various types and defend conclusions.

SC.7.N.1.4: Identify test variables (independent variables) and outcome variables (dependent variables) in an experiment.

SC.7.P.11.2: Investigate and describe the transformation of energy from one form to another.

SC.7.P.11.3: Cite evidence to explain that energy cannot be created nor destroyed, only changed from one form to another.

Sponsored by

Ford Motor Company Fund

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305-485-2323
Principal: Dr. Miguel Balsera

STEM made SIMPLE

(Sensible, Integrated, Meaningful, Purposeful Learning, & Engaging)

"STEM introduces students to the concept of wind energy by making a paper windmill."

Afraid to teach science or STEM in the classroom? Looking for ways that you and your students will find STEM enjoyable and fun, while at the same time ensure important concepts are being taught and learning is taking place? Start off with *STEM made SIMPLE* for projects such as making a paper helicopter, a windmill, parachutes, a lunar lander, and a catapult. Put into practice, these hands-on activities will help change the negative perception regarding teaching science and further project/problem-based learning.

One activity, the windmill project, introduces students to the concept of wind energy by making a paper windmill. As students learn more about wind energy as a renewable resource, they begin researching how wind energy is used in electricity, water conservation, and as a "future" resource in transportation vehicles by designing and creating a "wind-powered" car. Within the scope of the lessons, students learn a multitude of skills related to science inquiry, all while having fun.

Teachers often have limited time and difficulty finding lessons and resources they can use to teach STEM. This project will serve as a stepping stone for new teachers that know little about STEM, but would like to learn and implement it in their classroom. At the same time, it will give fresh ideas to veteran teachers that would like to teach STEM but don't know where to start.

Sponsored by

Raj Rawal and Anne Marie Miller

Navia Gomez
237245@dadeschools.net
Dante B. Fascell Elementary
Mail Code: 1811
305-380-1901
Principal: Margaret Ferrarone

Students

Nearly 500 students in grades K-5 participated in this project. All achievement levels, including ESOL and ESE varying exceptionalities are included. This project can be adapted to be implemented in small groups or with different grade levels throughout the school year.

Staff

Navia Gomez has been teaching for 17 years. She has received several Innovator and Disseminator grants from The Education Fund, several projects funded through DonorsChoose, and most recently the FAST (Florida Association of Science Teachers) Grant to implement a simulated Space Station in her classroom. In 2010, Ms. Gomez was voted Science Teacher of the Year by the DCSTA (Dade County Science Teachers Association).

Materials & Resources

Materials needed include parachute paper; paper clips; string; cardstock; construction paper; color copy paper; cardboard cut-outs; scotch tape and masking tape; small Dixie cups; marshmallows (optional), small pins; pencils; small-large plastic bottle caps; large-size popsicle sticks; glue gun; and glue sticks. A packet of all the templates, lessons (which will include reading hand-outs), activities and some materials will be provided to teachers that would like to adapt this project.

Online resources include Build a Catapult–KidsActivitiesBlog.com; Wind Works–sciencecenter.org; Working with Wind Energy–tryengineering.org; Parachutes–Science Experiments for Kids Lunar Lander–pbs.org/designsquad.

Standards

Science

SC.4.E.6.5: Investigate how technology and tools help to extend the ability of humans to observe very small and very large things.

SC.4.N.1.2: Compare the observations made by different groups using multiple tools and seek reasons to explain the differences across groups.

SC.4.N.1.6: Keep records that describe observations made, carefully distinguishing actual observations from ideas and inferences about the observations.

SC.4.N.1.7: Recognize and explain that scientists base their explanations on evidence.

SC.4.N.1.8: Recognize that science involves creativity in designing experiments.

Tiny House Off the Grid

"Students use artistic and creative talents to express understanding of spatial relationships, design creation, and product production."

Who says the 'American Dream home has to be traditional?' Certainly not students involved with *Tiny House off the Grid.* The concept of alternative living styles comes to life in this project as students use technology and resources to individually create a model home that incorporates real-life replicas of alternative energy sources, personal food production, and reduced personal footprint. Each student's model demonstrates the ability for the student to put thought into concrete expression and expand the understanding of real-world concepts.

Criteria of each student's model home are: The space can be no more than 800 square feet in total; also, accommodations must include one alternative energy source, an alternative to a municipal water supply, at least one type of food production on site, garbage disposal, and full living quarters with kitchen, bathroom, living space, bedrooms, windows, and doors. The tiny house enlightens students to global concepts while giving them the opportunity to use artistic and creative talents to express understanding of spatial relationships, design creation, and product production.

Students

A total of 140 7th grade regular science students participated in this project, with 75% achieving mastery. It can be adapted to any age and expanded to include all disciplines in an interdisciplinary unit.

Staff

Anne Daane has been a middle school teacher since 1994, teaching science, agriculture, and health. This project has been implemented quarterly for the past two years.

Materials & Resources

Materials needed for this project include any supplies to build models such as LEGOs, card board, popsicle sticks, paint, plant material, plastic plants, doll house supplies, and modeling clay.

Resources include the internet access, pod casts, and YouTube videos.

Standards

Science

SC.7.P.10.2: Observe and explain that light can be reflected, refracted, and/or absorbed.

SC.7.P.11.2: Investigate and describe the transformation of energy from one form to another.

SC.7.P.11.3: Cite evidence to explain that energy cannot be created nor destroyed, only changed from one form to another.

SC.8.L.18.3: Construct a scientific model of the carbon cycle to show how matter and energy are continuously transferred within and between organisms and their physical environment.

SC.8.L.18.4: Cite evidence that living systems follow the Laws of Conservation of Mass and Energy.

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School District Education Foundation Matching Grant Program

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John F. Kennedy Middle School
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305-947-1451
Principal: Mary Parton

Topo-Mapping the Space

"Topography sparks interest in students about space exploration and helps them create a picture of the terrain on Earth and other planets in the solar system."

Need a map? Students will tell you you've come to the right place… if you want a topographic map, that is. Topographic maps have a variety of uses, from planning the best route for a hike to determining the layout of a school. This case, *Topo–Mapping the Space,* enriches the perspective students have about planets' surfaces and specific characteristics. Increased knowledge on planets' topography allows students to develop better ideas about effective exploration and initial formation of planets, their growth, and chronological development.

This project brings students' mapping skills to the next level while exploring how probes measure landscapes through this hands-on STEM based activity. Students learn to complete a high resolution topographic database of a three dimensional surface on a flat piece of paper of Earth and other planets like Mars, compare/contrast a variety of maps, create a 3-D model of a section of a topographical map, and use iPads and the app 123D Catch to create a digital model of the 3-D model.

Topography sparks interest in students about space exploration and helps them create a picture of the terrain on Earth or other planets from the solar system. The students learn that the surface of the Earth is changing rapidly, at local, regional, national, even global scales, with significant repercussions for people, the economy, and the environment.

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Dr. Rossana Chiarella
rchiarella@dadeschools.net
Palm Springs North Elementary
Mail Code: 4281
305-821-4631
Principal: Maribel Dotres

Students

This project has been applied in a classroom with 4th and 5th grade students. There is no limit on the number of participant students on this project and it is applicable from Pre-K to 5th grade, adjusting the type of knowledge to be transferred to students accordingly and based on the grade level.

Staff

With 24 years of experience in the education field, Dr. Rossana Chiarella was selected as a Space Foundation Teacher Liaison Officer. She has earned a Lunar/Metorite Sample Disk certification traning from NASA. Dr. Chiarealla has been awarded the Educators as Heroes Award by the Dade Reading Council, The Special Recognition Teaching Award by MDCPS' office of Early Childhood Program, Featured Teacher of the Month by LEGO Foundation, Aerospace Education Excellence Awards by Civil Air Patrol, and Un Maestro Especial award by Univision 23.

Materials & Resources

Materials needed include a large sign or poster, metric ruler or measuring tape, chalk, magnifying glass, and note pads to record discoveries. For younger students, a box with paper over the top, an object with a simple shape, straight stick, markers, ruler, clay or Play-Doh, cardboard, 2 feet of dental floss, piece of plain white paper, long pencil, and 2 toothpicks.

Free digital topographic maps and aerial photographs can be found online through Earth Explorer.

Standards

Science

SC.4.E.6.5: Investigate how technology and tools help to extend the ability of humans to observe very small things and very large things.

SC.5.E.5.2: Recognize the major common characteristics of all planets and compare/contrast the properties of inner and outer planets.

SC.5.E.5.3: Distinguish among the following objects of the Solar System – Sun, planets, moons, asteroids, comets – and identify Earth's position in it.

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

Transformations are Easier if the Force is with You

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

"When algebra connects to their daily lives, students no longer ask, 'When will I use this after high school?'"

Through *Transformations are Easier if the Force is with You,* students discover the effects of transformations on algebraic functions through an inquiry-based lesson. This project inspires students to discover the rules for rigid transformations of functions. Using the Ti-84C, a color graphing calculator, and emulator software projected on an interactive whiteboard, students develop their own rules rather than being taught these rules by the instructor. This method of instruction empowers the students to accept responsibility for their own learning.

Each quarter, students are assigned a project where they have to represent at least 10 functions and their graphs in a real world situation. Students easily identify examples such as street signs, the McDonald's sign, the Walmart logo to represent graphs of functions. Quite often before the project, many students question how complicated algebra concepts connect to their daily life, asking, "When will I use this after high school?" This project allows students to not only explore the effects of translations in functions, but also connect functions and their graphs to their everyday life.

Through these lessons, students have new-found pride in their classroom and school because they develop a sense of ownership in their learning. In addition to this, they feel connected to technology that they may not ordinarily use.

Students

Dorothy M. Wallace COPE South is a small school serving the needs of teen-age mothers, their children, and their parents (grandparents). About 22 girls, 17-20 years old from the Liberal Arts Mathematics 2 Class, participated in this project, meeting on alternating days. This project could be adapted to any mathematics class from Algebra 1 and beyond.

Staff

Richard Boyd has been teaching in M-DCPS for 24 years, teaching a range of students from the economically challenged to the economically advantaged. He has been awarded numerous grants from DonorsChoose.org and an Innovator Grant from The Education Fund. Mr. Boyd has used these lessons for the last two years and was fortunate enough to have a para-professional assigned to his classroom this year.

Materials & Resources

A Ti-843 graphing calculator is needed for this project. If students do not have access to graphing calculators, but have access to a lab or tablets, they could use an internet site such as www.demos.com.

Standards

Mathematics

MAFS.912.A-CED.1.1: Create equations and inequalities in one variable and use them to solve problems.

MAFS.912.A-CED.1.2: Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.

MAFS.912.G-CO.1.2: Represent transformations in the plane using, e.g., transparencies and geometry software; describe transformations as functions that take points in the plane as inputs and give other points as outputs.

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School District Education Foundation Matching Grant Program

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Dorothy M. Wallace COPE Center South
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305-233-1044
Principal: Annette Burks

Trash to Treasure

"Students individually engineer and produce an invention made from a trashed recyclable item and sell it by creating an appealing iMovie infomercial."

One person's trash truly can become another's treasure. In *Trash to Treasure,* students individually engineer and produce an invention made from a trashed recyclable item and sell it by creating an appealing iMovie infomercial. Demonstrating their knowledge of percent of a number, students then price their inventions and give two discounts, showing savings and total discounts.

The purpose of this project is to solve problems in real-world contexts involving percent of a quantity. First, students select one recyclable item from a list of 10 to create an invention. After the invention is built, students then decide on the sale price, select two discount percent offers, and find savings and total price after each discount while announcing the final sale price. Students then write an essay explaining their choice of recyclable item, their invention, first discount/savings and total, second discount/ savings and total, and final sale price including both discounts. Lastly, students develop strategies to engage and convince the audience to purchase their creative invention. As a result, communication skills are enhanced, knowledge of finding the percent of a number is solidified, and self-confidence reaches new heights for developing a persuading iMovie infomercial for consumers.

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School District Education Foundation Matching Grant Program

Ana Fullana
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Lawton Chiles Middle School
Mail Code: 6161
305-816-9101
Principal: Nelson Izquierdo

Students

A total of 200 6th grade students, Advanced, a few ESE, and Gifted students participated in this project. The project was home-based but students asked questions during class or before school. This project can be adapted to meet higher or lower standards depending on students' ages or achievement levels. It can also be assigned as a group project.

Staff

Ana Fullana has taught mathematics for 20 years. She has been the recipient of the following awards: Teacher of the Year Miami-Dade County Council of Mathematics, 2004 and 2016 Middle School Teacher of the Year, Office Depot Teacher of the Year recognition award, and The Education Fund's Disseminator Grant 2014 and 2015, and the 2014 Adapter Grant.

Materials & Resources

Materials needed for this project include a computer, iPhone or smart phone, item to be recycled, imagination, creativity, and accessories for invention.

Resources include iMovie trailers, YouTube iMovie examples, teacher-made video for illustration, computer lab, KhanAcademy video on percents, worksheets, and Kahoot quiz.

Standards

Mathematics

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

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

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

English Language Arts

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

Pompeii: Discovering Interdisciplinary Perspectives

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

"Students learn about geology, art, history, and archaeology connected to the historical context of the life, destruction, and preservation of the ancient Roman city of Pompeii."

Pompeii: Discovering Interdisciplinary Perspectives is an in-depth study for students to learn about geology, art, history, and archaeology as it is connected to the historical context of the life, destruction, and preservation of the ancient Roman city of Pompeii. This innovative project combines different content area disciplines within a grade level, producing a curriculum that considers Pompeii as a central historical contextual focus for students to investigate. Through investigation using an interdisciplinary lens, students are afforded the opportunity to comprehend the significance and meaning of natural geologic phenomenon in relation to the human community of Pompeii, Italy 79 AD and the present.

Students learn about plate tectonics, subduction zones, and the various behaviors of Mount Vesuvius. Critical thinking skills are improved by comparing the dangers of living near Mount Vesuvius today with the risks of living in Florida, prone to sink holes, flooding, hurricanes, and tornadoes. Cultural influence of the Greeks and Egyptians on Roman culture and society is examined through frescoes, artifacts, and primary sources. Students also peer into the daily lives of Romans and learn how the various social classes lived, worked, and played. Students are able to express their understanding and exercise their social and organizational skills by making Roman villas, a model of Pompeii, and a mural to show environmental and cultural parallels between Pompeii and Miami.

Students

More than 100 middle school students participated in this interdisciplinary project. This project can be adapted to meet the needs of younger learners and smaller groups.

Staff

Mark Rosenkrantz has been teaching art and collaborating with teachers for many years. He has been awarded several Innovator Grants. This is the first year Mr. Rosenkrantz implemented this project.

Materials & Resources

Materials needed include: Giant Volcano Building Kit (Smithsonian); Mapping Earthquakes and Volcanoes Kit (Flinn-Scientific); Sea Floor Spreading Laboratory Kit (Flinn-Scientific); Social Studies White Railroad Boards; glue guns; hot glue sticks; assorted acrylic paint colors; white low fire earthenware clay; sand; art primed canvas roll; and modeling paste (to imitate Pompeii wall surface texture).

Online resources include: Khan Academy (Art Smart: Roman Wall Painting); A Day in Pompeii animation (Western Australia Museum); Google Earth; History Channel Pompeii: the Doomed City; and the podcast, Pompeii Lost and Found.

The following books are helpful: *Ashes to Ashes Uncovering Pompeii,* by Mary Lindeen; *Life In a Roman Villa,* by Jane Shutter; and *You Wouldn't Want to Live in Pompeii! A Volcanic Eruption You'd Rather Avoid,* by John Malam.

Standards

Visual Art

VA.68.H.1.3: Analyze and describe the significance of artwork from a selected group or culture to explain its importance to the population.

VA.68.S.1.3: Use ideas from cultural, historical, and artistic references to create personal responses in personal artwork.

Social Studies

SS.6.W.3.12: Explain the causes for the growth and longevity of the Roman Empire.

SS.6.G.2.4: Explain how the geographical location of ancient civilizations contributed to the culture and politics of those societies.

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Rod and Lucy Petrey

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Principal: Bernard Osborn

Women's History Lapbook Bio Report

"Students produce and present products that reflect their understanding of the contributions women have made in history."

Making historical figures relevant is one of the many challenges in Civics. Another is diminishing the time between the historical figures and students, thus helping them connect the accomplishments of the historical figures to how students live their lives today. Teachers are often challenged to answer the question, "Why are these historical figures important in the first place?" The *Women's History Lapbook Bio Report* provides the structure to look at historical figures in a new and relevant way by incorporating social media tools that students are already familiar with.

The purpose of this project is to incorporate Women's History in the Civics curriculum, giving students an opportunity to 'dig deeper' into the struggles, achievements, and contributions of women. Students create either a digital or paper Lapbook Bio Report based on their research of selected historical women figures, highlighting the women's achievements and their effects on society. By using a tablet, media center, or in-class laptop charts, students create their reports in whatever format they choose, providing innovative opportunities for presentation.

This project benefits students' academic achievement by giving them an opportunity to learn and practice research skills, close reading skills, writing skills, and presentation skills. Students are able to produce and present products that reflect their understanding of the contributions women have made in history.

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K-8 Learning Center
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305-257-6000
Principal: Tiffany Anderson

Students

A total of 145 7th grade students, ages 12-14 with levels ranging from ESOL to Gifted, participated in this project. Students worked on the project for two class blocks (90 minutes) and were given an additional two weeks to complete it at home. This project can be adapted to other ages, larger or smaller groups, and with differentiated instruction.

Staff

Georgette Mondesire has been teaching for 15 years and has received several awards. The most recent grant that she was awarded came from the Bill of Rights Institute. Ms. Mondesire has used this project in various forms for five years. The project does not require assistants, paraprofessionals, or volunteers.

Materials & Resources

Materials needed for a digital version: tablet and project instructions. For the paper version, the following items are needed: glue, scissor, file folders, construction paper, colored pencils, markers, student handouts, and computers.

Online resources include: Department of Social Studies Women's History Instruction http://socialsciences.dade-schools.net/files/briefs/Women's%20History%20Month%20Instructional%20Resources_BID18993.pdf and the following YouTube videos: Kid President Awesome Girls; History of Women's History Month Video - NWHM; History of Women.

Standards

Social Studies

SS.7.C.2.10: Examine the impact of media, individuals, and interest groups on monitoring and influencing government.

English Language Arts

LAFS.68.WHST.1.2: Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes.

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.RH.3.8: Distinguish among fact, opinion, and reasoned judgment in a text.

My Life in 2 Minutes

"Students are immersed into a true-to-life story that evokes emotion and encourages them to form a connection between their personal life and the events of the Holocaust."

If you were given two minutes to gather your most important possessions, what would you take? That's the question students are asked in *My Life in 2 Minutes,* as students literally have two minutes to decide on their most important possessions, write them down on paper, and then throw the paper away in a trash can. Students are then told that they can't have their possessions back and that they are gone forever. Stunned students are immediately immersed into a true-to-life story that evokes emotion and encourages them to form a connection with their personal life and the events of the Holocaust. Further in the lesson, students learn about the trains that were sent to the concentration camps of Auschwitz–Birkenau, what the camps looked like, and how what few belongings the Jewish people still had were taken from them when they arrived. They begin to understand that learning about one of the most horrific events in history is important for developing a compassionate society that does not discriminate or persecute people because of their race, gender, or religion.

This is a Holocaust project that provides students with the best understanding of the events of the Holocaust. Through this course of emotional connection, students sit up and take notice that there is more to life than their cell phones and their gaming systems. They begin to realize that there are real problems in our world and life can change in a minute.

Students

This is a whole group lesson that was used with fourth grade students.

Staff

Sharon Geuther has been teaching for 11 years. She was the recipient of the Teacher of the Year award for her school in 2012. Ms. Geuther has used this project for the past five years. The simplicity of this project does not require any volunteers.

Materials & Resources

Materials needed for this project include paper; pencils; *The Butterfly,* by Patricia Polacco; and a Promethean Board to project pictures.

Resources used for this project came from Miami-Dade County Public Schools' Holocaust resource packet.

Standards

English Language Arts

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

Social Studies

SS.912.W.1.3: Interpret and evaluate primary and secondary sources.

SS.912.W.7.8: Explain the causes, events, and effects of the Holocaust (1933-1945) including its roots in the long tradition of anti-Semitism, 19th century ideas about race and nation, and Nazi dehumanization of the Jews and other victims.

Sponsored by

Robert Russel Memorial Foundation

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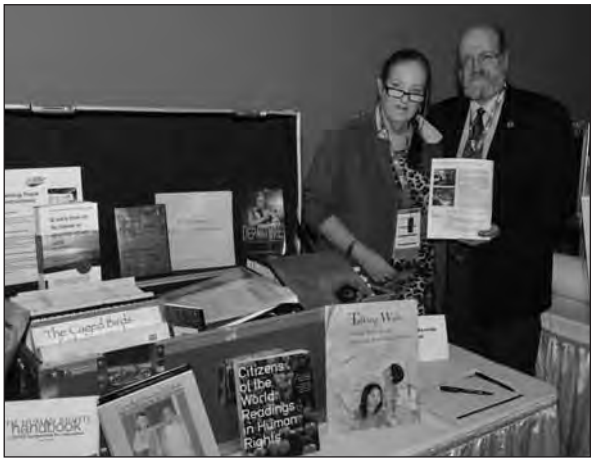
Principal: Brenda Swain

Teaching Trunks on the Holocaust



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

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

The curricula 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.

How to Reserve a Trunk Free of Charge

Contact the Florida Holocaust Museum in St. Petersburg directly to reserve a trunk to use in your school or classroom. They ship free of charge. For more information, go to flholocaustmuseum.org.

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Teaching Trunk Advisors

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

Tom W. Glaser
tomwglaser@dadeschools.net
Mr. Glaser teaches at Mater Academy Charter High School. He attended the first U.S. Holocaust Memorial Museum Belfer Conference and was one of the first 25 Mandel Fellows. Mr. Glaser is a member of the Florida Education Commissioner's Task Force on Holocaust Education and the Miami Beach Holocaust Memorial Education Committee.

Esther Sterental
esterental@dadeschools.net
Ms. Sterental teaches at Coral Reef Senior High. She 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.

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That's right, The Education Fund has supplies that teachers need to stock their classrooms and much, much more, all for free!

Sounds too good to be true? It's not!!

ANY teacher in Miami-Dade County Public Schools can request a pass to shop, for free.

The "Ocean Bank Center" is an 11,000 sq. ft. warehouse conveniently located in Medley where teachers go to fill their shopping carts, and their classrooms, with basic supplies and other materials, such as fabric, maps, and trinkets, which can be used as creative teaching aids.

Generously sponsored by Ocean Bank for more than 20 years, The Education Fund's Ocean Bank Center contains aisles and aisles of material donated from local businesses. There's no end to what your students can achieve with FREE materials from the Ocean Bank Center!!

We host more than 2,000 teacher visits at the Ocean Bank Center. You should visit too!

Every K-12 teacher working in the public schools in Miami- Dade is entitled to a shopping visit every six months.
Visits are on selected Wednesdays 2:00 p.m. – 6:00 p.m., and Saturdays 8:00 a.m. – Noon.

See you at the Ocean Bank Center!

Sign-Up for a visit. It's easy and simple!

- Visit www.educationfund.org.
- Click on the "What We Do" button and select "Programs" and "Ocean Bank Center for Educational Materials" from the list.
- Complete the "Online Pass Request" form and submit.

Via email you'll receive a "pass to visit" for the next available day.

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