Miami Dade STEM

Full STEAM Ahead 2016

Saturday, February 6, 2016

Miami Dade College, North Campus
11380 Northwest 27th Avenue
Miami, FL 33167

Artwork by: Sofia Hernandez Grade 8 Student South Miami K-8 Center

DIVISION OF ACADEMICS • DEPARTMENT OF MATHEMATICS AND SCIENCE
January 13, 2016

Dear Miami-Dade STEM Expo participants:

Welcome to the 2016 Miami-Dade Science, Technology, Engineering, and Mathematics (STEM) Expo! This is the largest gathering of Miami-Dade County’s most creative, intelligent, and resourceful students who will compete and demonstrate their expertise in STEM activities that they have developed throughout the school year.

This event is an excellent opportunity for students to showcase the fruits of their hard work and learn about the responsibility of communicating STEM integrated projects and research to the community. As we continue to educate our children and prepare them for the challenges of tomorrow, we are building a better future by encouraging them to explore, discover, and solve problems through STEM.

Thanks to all the participating community members, teachers, administrators, and organizations that contribute to the success of this event. I also want to acknowledge the staff of both Miami-Dade County Public Schools and Miami Dade College-North Campus for their commitment to the education of our students and for making this event a reality.

On behalf of The School Board of Miami-Dade County, Florida, and the M-DCPS’ community, I thank you for your participation in the Miami-Dade STEM Expo. Congratulations to all the student participants, and a special thank you to the parents, mentors, and teachers who encouraged and supported them in their projects. As partners in education, we are enabling our children to realize their hopes for the future and securing a better world for everyone.

Sincerely,

Alberto M. Carvalho
Superintendent of Schools

AMC:mf
L627
Miami-Dade STEM Expo
AUTOGRAPHS, HONORS, AND ACCOLADES
Full STEAM Ahead!

Special Thanks to the Miami-Dade STEM Expo Sponsors

Science, Technology, Engineering, Arts, Mathematics
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**http://stem.dadeschools.net**
Miami-Dade STEM Expo
AGENDA
Saturday, February 7, 2015

**Building A – Science Complex**
8:45 a.m. – 9:45 a.m.  Opening Ceremony – Science Complex
8:45 a.m. – 4:00 p.m.  US Army – Emergency First Aid
10:00 a.m. – 2:00 p.m.  International Bridge Building Competition

**Lakeside Road**
10:00 a.m. – 2:00 p.m.  Interactive Activities: Forensic Science, Mobile Labs, and Bat Mobile
Sprout Mobile
Fairchild Tropical Botanic Garden Plant Mobile
Miami Auto Museum Bat Mobile

**Various locations on campus** (see pages 4 – 7)
10:00 a.m. – 12:00 p.m.  Elementary Science Fair Judging (closed event)
10:00 a.m. – 2:00 p.m.  South Florida Regional Science and Engineering Fair Judging (closed event)
10:00 a.m. – 2:30 p.m.  SECME Competitions (spectator and closed events)
10:00 a.m. – 1:00 p.m.  Interactive Activities

**Building 5**
10:00 a.m. – 2:00 p.m.  US Army Mobile Lab Building 5, Drop-off

**Gymnasium**
10:00 a.m. – 2:00 p.m.  Ten-80 Race Cars
10:00 a.m. – 11:30 p.m.  SECME Mousetrap Car and Vex IQ – Gymnasium
SECME Water-bottle Rocket Launch – Gymnasium Parking Lot 9
11:30 a.m. – 12:30 p.m.  SECME Egg Drop Container Testing – Gymnasium Parking Lot 9
Vex Robotics and FPL Generator Build – Gymnasium

**Buildings 3 and 4**
10:00 a.m. – 2:00 p.m.  Discovery Education – Building 3, Courtyard
Florida Department of Agriculture: Giant African Land Snail – Building 3 Courtyard
Harcourt Mifflin Houghton – Building 3 area
Miami Dade College Interactive Academic STEM Tables – Building 3, Courtyard
Science with a Twist (SWAT) – Building 3, Courtyard
Girls Who Code, Coral Gables Museum, Maker Faire and M-DCPS MAST Academy
LandSharc Mobile and VPA Tent (grass area)
Patricia and Phillip Frost Museum of Science – Building 4 Atrium

11:30 a.m. – 2:00 p.m.  Lunch available –
Food trucks (Science Complex), cafeteria (Bldg. 4), and gymnasium (Bldg. 14)

**Science Fair Gallery of Projects – Open to the Public**
12:00 p.m. – 12:30 p.m.  Elementary Science Fair Projects – Building 3
12:30 p.m. – 12:40 p.m.  Elementary Science Fair Projects retrieval – Building 3
2:00 p.m. – 4:00 p.m.  South Florida Regional Science and Engineering Fair Projects – Building A

**Building 3:**
1:00 p.m. – 1:30 p.m.  Cody the Humanoid
2:00 p.m. – 2:45 p.m.  SECME Elementary Award Presentation
3:00 p.m. – 3:40 p.m.  SECME Middle School Award Presentation with Piano Slam
3:45 p.m. – 4:15 p.m.  SECME Senior High School Award Presentation with Piano Slam

**Building 4**
2:30 p.m. – 3:30 p.m.  Elementary Science Fair Awards Ceremony - Building 4, Atrium
Opening Ceremony

Science Complex, Main Stage
8:45 a.m. – 9:45 a.m.

Mistress of Ceremony
Dr. Ava D. Rosales
Executive Director

Miami Central Senior High School Marching Rockets
Mr. John McMinn, Director of Bands

Call to Colors & Pledge of Allegiance
Miami Central Senior High School Color Guard
Major Charles Council

National Anthem
Mr. Marcelo Araujo-Cox, 10th Grade Student
Miami Beach Senior High School

Welcome
Mr. Cristian Carranza, Administrative Director
Division of Academics

Opening Remarks
Mr. Alberto M. Carvalho, Superintendent of Schools
Miami-Dade County Public Schools

Ms. Malou C. Harrison, President
Miami Dade College, North Campus

Special Guests
Miss Mary Katherine Fechtel, Miss Florida 2015

Dr. Hakeem Oluseyi, Host
Science Channel’s Outrageous Acts of Science

Closing Remarks
Dr. Heather Belmont, Dean of the School of Science
Miami Dade College, North Campus

Parade of SECME Banners
Dr. Ava D. Rosales, Executive Director
Department of Mathematics and Science

Dismissal
March of the Competitors and Spectators
Opening Ceremony Golden ticket sponsored by Miami Auto Museum
# Miami-Dade STEM Expo At-a-Glance

<table>
<thead>
<tr>
<th>Time</th>
<th>Elementary Science Fair</th>
<th>South Florida Regional Science &amp; Engineering Fair</th>
<th>SECME</th>
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<tr>
<td>8:00 a.m.</td>
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<td>Judge’s Check-in &amp; Orientation</td>
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<td>8:45 a.m. – 9:45 a.m.</td>
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<td>Opening Ceremony</td>
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<td>10:00 a.m. – 1:00 p.m.</td>
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<td>Interactive Activities</td>
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<tr>
<td>10:00 a.m.</td>
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<td>Judging Building 3</td>
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<td>10:30 a.m.</td>
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<td>11:00 a.m.</td>
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<td>11:30 a.m.</td>
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<tr>
<td>12:00 p.m.</td>
<td>Gallery of Projects Open to Public Building 3</td>
<td>Judging Projects – Students Only Bridges – Open to the Public</td>
<td>Competitions</td>
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<tr>
<td>12:30 p.m.</td>
<td>Project Retrieval Building 3</td>
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<tr>
<td>12:45 p.m.</td>
<td>Interactive Activities for Competitors Building 3 – 4</td>
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<td>1:45 p.m.</td>
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<td>2:00 p.m.</td>
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<td>Award Ceremony Building 4</td>
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<td>2:30 p.m.</td>
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<td>3:00 p.m.</td>
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<td>Gallery of Projects Open to Public Science Complex</td>
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<td>3:30 p.m.</td>
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<td>4:00 p.m.</td>
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<td>Project Retrieval</td>
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*Lunch available from 11:30 a.m. – 2:00 p.m.*
8:00 a.m. Judge’s Check-in & Orientation (Building 3, Room 3238 and 3239)
          Student Check-in Science Complex, Plaza (north side)
8:45 a.m. – 9:45 a.m. Opening Ceremony, Science Complex
10:00 a.m. – 2:00 p.m. Interactive Activities and Mobile STEM Labs in courtyard and grassy area
          Discovery Education
          Florida Department of Agriculture: Giant African Land Snail (GALS)
          Girls Who Code
          Harcourt Houghton Mifflin
          Miami Dade College Academics
          SWAT: Science with a Twist (Courtyard)
          Patricia and Phillip Frost Museum of Science (Building 4 Atrium)
          Maker Faire – (between Building 3 and 4, grassy area)
          LandSharc– (between Building 3 and 4, grassy area)
10:00 a.m. – 12:00 p.m. Elementary Science Fair Judging, Building 3 (Room 3249)
12:00 p.m. – 1:30 p.m. LUNCH – Cafeteria, Gymnasium, Science Complex (Food Trucks)
12:00 p.m. – 12:30 p.m. Gallery of Projects – Open to the Public, Building 3 (Room 3249)
2:30 p.m. – 3:30 p.m. Elementary Science Fair Award Ceremony (Building 4 Atrium)

Mistress of Ceremony ................................. Ms. Glenda Moton, Teacher
                                     Miami Norland Senior High School

Palmetto Elementary Jazz Band performance
.......................................................... Mr. Oliver Diez, Music Teacher

Remarks ................................. Dr. Ava D. Rosales, Executive Director
                                     Department of Mathematics and Science

Department of Mathematics and Science Presentation of Awards
.......................................................... Dr. Millard Lightburn, District Supervisor
...................................................... Ms. Noreyda Casanas, Curriculum Support Specialist
...................................................... Ms. Yusimi Perez, Curriculum Support Specialist

Golden ticket sponsored by CappSci Miami Science Barge

Elementary projects available for pick-up from 12:30 p.m. to 12:40 p.m.
Projects left behind will be discarded
South Florida Regional Science and Engineering Fair

Science Complex
8:00 a.m. – 4:00 p.m.

7:30 a.m.  Judge’s Check-in & Orientation, Building 9
8:00 a.m.  Student Check-in Science Complex, Exhibit Rooms
8:45 a.m. – 9:45 a.m.  Opening Ceremony, Science Complex
10:00 a.m. – 12:00 p.m.  Judging of Projects Student Exhibitors only, Science Complex

- Animal Sciences ............................................................. A311
- Behavioral and Social Sciences ........................................ A305
- Biomedical and Health Sciences ...................................... A114
- Cellular and Molecular Biology/Biochemistry .................. A104
- Chemistry ...................................................................... A104
- Earth and Environmental Sciences ................................. A102-103
- Engineering (Middle School) ......................................... A116
- Environmental Engineering ............................................ A102-103
- Intelligent Machines, Robotics and System Software ........ A211
- Mathematics and Computational Sciences ...................... A211
- Microbiology .................................................................. A104
- Physics and Astronomy and Engineering (High School) .... A117-118
- Plant Sciences ................................................................. A315 & A316
- Research Paper (Judges Only) ........................................... Building 9
- Bridges (Open to the Public) ........................................... Main Stage

10:00 a.m. – 1:00 p.m.  Interactive Activities
12:00 p.m. – 1:00 p.m.  LUNCH, Cafeteria, Science Complex and Food Trucks
1:00 p.m. – 3:00 p.m.  Judging, Continued
2:00 p.m. – 4:00 p.m.  Gallery of Projects – Open to the Public, Science Complex

Projects available for pick-up from 4:00 p.m. to 5:00 p.m.
Projects left behind will be discarded
21st Annual SECME Olympiad and Festival
SECME: Full STEaM Ahead!

Various Locations
8:00 a.m. – 4:15 p.m.

8:00 a.m. Judges and SECME Teacher Coordinators’ Check-in & Orientation
SECME Coordinators/School Teacher Representative: Science Complex Hallway – behind stage
SECME Judges: Gymnasium

8:15 a.m. Banner Check-in & Line-up Science Complex Hallway -North side of building (behind stage)

8:45 a.m. Opening Ceremony and Parade of Banners - Science Complex

**Spectator Events**
Public invited to observe

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<td>Brain Bowl Finals</td>
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<td>Vex and Vex IQ Robotics</td>
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<td>Bridges</td>
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<td>Water-Bottle Rockets</td>
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<tr>
<td>Egg Drop</td>
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<td>FPL Generator Build</td>
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**Closed Events**
Registered competitors only

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<td>Brain Bowl Preliminary</td>
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<td>Mathematics</td>
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<tr>
<td>Patent Pending</td>
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10:00 a.m. Phase I Competitions
SECME Competitors retrieve pre-constructed projects from Gymnasium
- Banner**: Gymnasium
- Brain Bowl Preliminary**: ES, Building 4 – Quiet Dining; SHS, Building 2 (2151)
- Bridges*: Science Complex Stage
- FPL Generator-build Project Check-in – Gymnasium
- Mathematics**: SHS, Building 4, M/J Taylor Lounge 4207-1 and MS (Bonus Round), Cafeteria
- Mousetrap Car*: Gymnasium
- Patent Pending**: Building 4 - Cafeteria
- Vex IQ*: Gymnasium
- Water-Bottle Rockets*: Lot 9 behind Gymnasium
- The Yaeger Foundation, Inc., 12th Annual Bionic Hand Competition*: SHS

11:00 a.m. Phase II Competition **
- Brain Bowl Preliminary**: MS, Building 2 (2151)
- FPL Generator Build*: Gymnasium
- Mathematics**: ES Building 4 – Quiet Dining, MS, Building 4 M/J Taylor Lounge 4207-1 and SHS (Bonus Round), Cafeteria

11:30 a.m. Phase III Competition
- Egg Drop*: Lot 9, behind Gymnasium
- Bionic Hand Competition*: MS, Building 2 (2158)
11:30 a.m. – 2:00 p.m.  LUNCH–Cafeteria (Building 4); Gymnasium; Food Trucks (Science Complex)

12:30 p.m.  Phase IV Competition
- Vex Robotics*: Gymnasium
- Brain Bowl Final**: SHS, Building 2 (2151)

1:30 p.m.  Phase V Competition
- Display of Banners*: Gymnasium
- Brain Bowl Final**: MS, Building 2 (2151)

SECME projects available for pick-up from 2:00 p.m. to 3:30 p.m.
Projects left behind will be discarded

2:00 p.m. – 4:00 p.m.  SECME Olympiad & Festival Awards Ceremony
Building 3 (3249)

2:00 p.m. – 2:45 p.m.  SECME Elementary Awards Presentation and ES Brain Bowl Finals
3:00 p.m. – 3:40 p.m.  SECME Middle School Award Presentation
3:45 p.m. – 4:15 p.m.  SECME Senior High School Award Presentation

Officiates

Victoria Humphrey, Miss Winter Park 2016
Dr. Heather Belmont, Dean of the School of Science
Miami Dade College, North Campus

Mr. Cristian Carranza, Administrative Director
Division of Academics - STEAM

Dr. Ava D. Rosales, Executive Director
Department of Mathematics and Science

Presentation of Awards
Department of Mathematics and Science
  Mr. Dane Jaber, Instructional Supervisor
  Ms. Vanessa Baker, Curriculum Support Specialist
  Ms. Maribel Bernat, Curriculum Support Specialist - SECME Stars III
  Ms. Cindy Jolicoeur, Curriculum Support Specialist
  Ms. Mary Tweedy, Curriculum Support Specialist

Golden ticket sponsored by CappSci Miami Science Barge

Elementary School (ES), Middle School (MS), Senior High School (SHS)
Interactive Activities

Below, please find a listing of Interactive Workshops providing students, parents, teachers, and other educational stakeholders with an opportunity to learn all about the STEM related resources in our community. Visit with representatives from a variety of areas who will address current research, post-secondary options, and educational strategies for teaching and learning.

A. Cody: The Humanoid Opening Ceremony and Building 3 Courtyard – 12:30 p.m. – 1:30 p.m.
This interactive dialogue showcases coding with the Department of Mathematics and Science 21st Century Community Learning Centers SECME Stars III and Bosch Foundation grant funded NAO Humanoid.

B. Miami Dade College STEM Information Tables Building 3 Courtyard – 10:00 a.m. – 2:00 p.m.
Miami Dade College staff at these tables will provide resources and information for students and parents seeking postsecondary studies, opportunities, and preparation.

C. Coral Gables Museum Building 3, Grassy Area 10:00 a.m. – 2:00 p.m.
Students will learn about creating a green community from scratch by physically transforming a blank city map into a model of green design.

D. Discovery Education Building 3, Grassy Area 10:00 a.m. – 2:00 p.m.
Join Discovery Education for an interactive STEM station and meet two of the nation’s most innovative students in STEM: Hanna Herbst, named America’s Top Young Scientist in the 2015 Discovery Education 3M Young Scientist Challenge, and Maria Elena Grimmell, the individual national winner of the 2015 Siemens Competition in Math, Science and Technology. Check out their winning inventions and learn about what drives their passion for innovation! Also register yourself in this year’s competitions and have some fun with a few hands-on STEM experiences!

E. Florida Department of Agriculture Giant African Land Snail (GALS): Building 3 Courtyard 10:00 a.m. – 2:00 p.m.
This presentation will address the negative impact that the Giant African Land Snail has on South Florida ecosystem and how we can report its presence in our area.

F. Patricia and Phillip Frost Museum of Science: Building 4, Atrium 10:00 a.m. – 2:00 p.m.
The Frost Science Wind Tunnel—Watch your ideas take flight in this interactive, hands-on workshop! Participants will build and engineer innovative aircrafts out of reusable materials, and then test their creations in the Frost Science wind tunnel. All will see how physics, math, science, and a unique sense of creativity become the perfect “ingredients” to solving engineering challenges around the world and into the future.

G. Be A Maker @ Miami Mini Maker Faire, Building 3 Grassy Area, 10:00 a.m. – 2:00 p.m.
Learn to solder and design 3D printed prototypes at our workshop tables hosted by local makers, and find out how you can participate at the upcoming Miami Mini Maker Faire, an all-ages festival of DIY enthusiasts in technology, arts and crafts taking place in Miami on February 20th and 21st, 2016. For more information, visit makerfairemiami.com

H. Piano Slam Building 3, Conference Center Upstairs
See how students can be engaged to write poetry about the MUSIC in their lives, while incorporating STEM.

I. Pitsco and STEM learning
Pitsco provides hands-on STEM learning opportunities through products, activities, curriculum, and classroom solutions designed to foster collaborative learning, problem solving, and leadership.

J. Girls Who Code – Summer Immersion Program Building 3, Grassy Area 10:00 a.m. – 2:00 p.m.
A free 7-week intensive computer science course that embeds classrooms in technology companies and universities. The project-based curriculum paired with 300+ hours teaches Girls everything from robotics to mobile development to HTML and CSS. Gaining exposure to the tech industry and receiving valuable mentorship from women working in technology.

K. SWAT: Science With a Twist Building 3, Courtyard 10:00 a.m. – 2:00 p.m.
Visit the interactive science hands-on activities for elementary students and experience the excitement of science, technology, engineering and mathematics (STEM) in action.

L. VPA: Full STEAM Ahead! “A” is for Art Building 3, Grassy Area 10:00 a.m. – 2:00 p.m.
“A” is for Art... as well as for the Advantages students receive when the arts are integrated throughout the curriculum. Participants will explore water color techniques through hands-on experiences that encourage creativity and discovery as they learn about multiple states of matter and their corresponding physical characteristics.

M. STEM Vehicles and Mobile Labs: Various Locations 10:00 a.m. – 2:00 p.m.
These interactive, mobile learning vehicles feature enriching and engaging hands-on activities that offer experiential learning that will inspire critical thinking and empower students to make a difference in the world around them and advance their knowledge of the integration of science, technology, engineering and mathematics (STEM).

Miami Auto Museum Bat Mobile: Lakeside (across from Science Complex)
Sprout: Lakeside (across from Science Complex)
US Army: Building 5, Drop-off (West Side)
Fairchild Tropical Botanic Garden Plant Mobile: Lakeside (across from Science Complex)
LandSharc MAST Academy: Between Gymnasium and Building 4
Ten-80 Race Challenge Exhibition: Behind Gymnasium (basketball court)
Special Guests

MaryKatherine Fechtel, Miss Florida 2015

MaryKatherine Fechtel, Miss Florida 2015, is a senior at the University of Florida. Her major is Family, Youth and Community Sciences and her minor is Nonprofit Organizational Leadership. She plans to obtain a Juris Doctorate Degree and practice in the field of International Human Rights Law. She won the Miss Florida title in June 2015 when she competed with 47 other young women for the opportunity to represent the Sunshine State and an educational scholarship of $19,600.00. MaryKatherine represented Florida in the 2016 Miss America Pageant and was named as a Top Ten Finalist and Preliminary Swimsuit winner. She won an additional $8,000 in scholarships at the Miss America Pageant.

As Miss Florida she travels the state promoting her personal platform, A Safety Net: Protecting Our Youth from Online Predators, with a focus on sex trafficking. She is a state ambassador for Miss America’s national platform partner, Children’s Miracle Network Hospitals, and serves as a spokesperson for the Everglades Foundation advocating the protection and restoration of America’s Everglades.

MaryKatherine’s honors at the University of Florida include a Florida Bright Futures Scholar, member of the Florida Blue Key Honor Society, and acceptance as an international student at Viadrina European University in Frankfurt, Germany. She served as the Vice President of Standards for her sorority Kappa Delta and as the University of Florida Family Relations Captain for Children’s Miracle Network Hospitals. She was a Dazzler for the University of Florida performing at all football and basketball games and has toured multiple countries with a mission team of performing artists.

The Miss America Organization is the world’s largest provider of scholarship assistance for young women and one of nation’s largest achievement programs.

Dr. Hakeem Oluseyi, Astrophysicist – Outrageous Acts of Science

Dr. Hakeem M. Oluseyi is an internationally recognized astrophysicist, inventor, science TV personality, and global science education activist. His research interests span the fields of astrophysics, cosmology, and technology development. He received B.S. degrees in Physics & Mathematics from Tougaloo College and M.S. and Ph.D. degrees in Physics from Stanford University.

Since 2007, Dr. Oluseyi has been a professor of Physics & Space Sciences at the Florida Institute of Technology. He currently has 7 U.S. patents, 4 EU patents and over 60 scholarly publications in the areas of astrophysics, optics and detector technologies development; nanotechnology manufacturing; observational cosmology; and the history of astronomy. Dr. Oluseyi is passionate about communicating the scientific process and the results of modern science to students and the public in the U.S. and around the world. He has won several honors including recent selections as a 2015 MIT MLK Fellow, a 2012 TED Fellow, and a Speaker & Specialist for the U.S. State Department in 2011 and 2013.

Dr. Oluseyi currently leads a research group at FIT that hacks stars to understand the fundamental interactions of plasmas and electromagnetic fields and that investigates Galactic structure and formation by using the techniques of big data astrophinformatics and high--performance computing.

Most recently, Dr. Oluseyi has begun working with the 100 Year Starship Project to help lay the groundwork in preparation for the first human mission to a nearby star system.
Elementary Science Fair Schools

Academir Charter Preparatory
Academir Charter School West
Academir Preparatory
Academir Preparatory Academy
Academy for International
  Education Charter School
Amelia Earhart ES
Arch Creek ES
Archimedean Academy
Auburndale ES
Ben Sheppard ES
Biscayne ES
Broadmoor ES
Calusa ES
Carol City
Charles D. Wyche ES
Charles Hadley ES
Christina M. Eve ES
Citrus Grove ES
Claude Pepper ES
Coconut Grove ES
Colonial Drive ES
Coral Reef ES
Coral Terrace ES
Crestview ES
Cutler Ridge ES
Dante Fascell ES
David Fairchild ES
Doral Academy Charter
Dr. Edward L. Whigham ES
Dr. Gilbert L. Porter ES
Dr. Henry Perrine ES
Dr. Manuel Barreiro ES
Dr. Robert Ingram ES
Dr. William Chapman ES
E.W.F Stirrup ES
Emerson ES
Eneida M. Hartner ES
F.S. Tucker ES
Fairland ES
Flamingo ES
Florida City ES
Greenglade ES
Henry M. Flagler ES
Hialeah ES
Howard Drive ES
iMater Elementary
Jack D. Gordon ES
Joe Hall ES
Kendale ES
Kendale Lakes ES
Kinloch Park ES
Lake Stevens ES
Lenora Brayon Smith ES
Madie Ives ES
Mae Walters ES
Mater Academy Intenational
  Mater Beach Academy Beach)
Maya Angelou ES
Miami Heights ES
Miami Shores ES
Miami Spring ES
Norma Butler Bossard ES
North Beach ES
North Dade Center for Modern
  Languages
North Hialeah ES
North Miami ES
Norwood ES
Oak Grove ES
Ojus ES
Orchard Villa ES
Palmetto ES
Parkview ES
Pinecrest Academy South
Pinecrest Academy North
Pinecrest Cove Preparatory
Pinecrest ES
Rainbow Park ES
Redland ES
Rockway ES
Royal Palm ES
Santa Fe Advantage Academy
Scott Lake ES
Shenandoah ES
Silver Bluff ES
South Hialeah ES
Southside ES
Spanish Lake ES
Sunset ES
Sunset Park ES
Sweetwater ES
Sylvania Heights ES
The Charter School at
  Waterstone
Twin Lakes ES
Van E. Blanton ES
Village Green ES
Wesley Mathews ES
West Hialeah Gardens ES
Whispering Pines ES
Youth Co-op Charter School
Zora Neale Hurston ES

K – 8 Centers

Ada Merritt K-8 Center
Air Base K-8 Center
Aventura Waterways K-8
Blue Lakes K-8
Bob Graham Education Center
Campbell Drive K-8
Coral Gables Preparatory
  Academy
Cypress K-8
Ernest R. Graham K-8 Center
Eugenia B. Thomas K-8 Center
Fienberg/Fisher K-8 Center
Frank C. Martin K-8 Center I
Gateway Environmental K-8
Hubert Sibley K-8
iPreparatory Academy
Irving and Beatrice Peskoe K-8
  Center
John I. Smith K-8 Center
Key Biscayne K-8 Center
Lee Wood K-8 Center
Lilie C. Evans K-8
Miami Lakes K-8 Center
Norman S. Edelcup/Sunny Isles
  K-8 Center
North County K-8
Ruth K. Broad/Bay Harbor K-8
  Center
South Miami K-8 Center
Vineland K-8 Center
Winston Park K-8
## South Florida Regional Science and Engineering Fair Schools

### M-DCPS K-8 Centers

- Ada Merritt K-8 Center
- Air Base K-8 Center
- Aventura Waterways K-8 Center
- Bob Graham Education Center
- Bowman Ashe/Doolin K-8 Academy
- Coconut Palm K-8 Academy
- Coral Gables Preparatory Academy
- Coral Way K-8 Center
- David Lawrence Jr K-8 Center
- Devon Aire K-8 Center
- Ernest R Graham K-8 Academy
- Eugenia B. Thomas K-8 Center
- Fienberg-Fisher K-8
- Gateway Environmental K-8 Center
- Irving and Beatrice Peskoe K-8 Center
- Jane S. Roberts K-8
- John I Smith K-8 Center
- Kenwood K-8 Center
- Key Biscayne K-8 Center
- Leewood K-8 Center
- Lillie C. Evans K-8 Center
- Miami Lakes K-8 Center
- Norman S. Edelcup Sunny Isles Beach K-8
- Ruth K. Broad Bay Harbor K-8 Center
- South Miami K-8 Center
- Winston Park K-8 Center

### M-DCPS Middle Schools

- Brownsville MS
- Carol City MS
- Country Club MS
- George Washington Carver MS
- Glades MS
- Hammocks MS
- Herbert A. Ammons MS
- Hialeah Gardens MS
- Highland Oaks MS
- Homestead MS
- Horace Mann MS
- Howard D McMillan MS
- John F. Kennedy MS
- Jorge Mas Canosa MS
- Jose de Diego MS
- Lamar Louise Curry MS
- Miami Lakes MS
- Miami Springs MS
- Nautilus MS
- Norland MS
- North Dade MS
- Palm Springs MS
- Palmetto MS
- Paul W. Bell MS
- Ponce de Leon MS
- Redland MS
- Riviera MS
- Rockway MS
- Ruben Dario MS
- South Dade MS
- Thomas Jefferson MS
- W. R. Thomas MS

### M-DCPS 6-12 Schools

- Jose Marti MAST 6-12 Academy
- Miami Arts Studio @ Zelda Glazer
- Miami Palmetto SHS
- Miami Lakes Educational Center
- Miami Palmetto SHS
- Miami SHS
- Miami Southbridge SHS
- Miami Springs SHS
- New World School of the Arts
- North Miami Beach SHS
- North Miami SHS
- Robert Morgan Educational Center
- Ronald W. Reagan/Doral SHS
- South Dade SHS
- South Miami SHS
- Southwest Miami High
- Terra Environmental SHS

### M-DCPS Senior High Schools

- Barbara Goleman SHS
- BioTECH @ Richmond Heights
- Center for International Education: A Cambridge Associate
- COPE Center North
- Coral Gables SHS
- Coral Reef SHS
- Cutler Bay SHS
- Dorothy M. Wallace COPE Center
- Dr. Michael M. Krop SHS
- Felix Varela SHS
- G. Holmes Braddock SHS
- Hialeah Gardens SHS
- Hialeah SHS
- Hialeah-Miami Lakes SHS
- Homestead SHS
- International Studies Preparatory Academy
- iPreparatory Academy
- iTech
- John A. Ferguson SHS
- Law Enforcement Officers
- Memorial High
- Maritime and Science
- Technology Academy
- Medical Academy for Science and Technology
- Miami Beach SHS
- Miami Carol City SHS
- Miami Central SHS
- Miami Coral Park SHS
- Miami Edison SHS
- Miami Jackson SHS
- Miami Lakes Educational Center
- Miami Palmetto SHS
- Miami SHS
- Miami Southbridge SHS
- Miami Springs SHS
- New World School of the Arts
- North Miami Beach SHS
- North Miami SHS
- Robert Morgan Educational Center
- Ronald W. Reagan/Doral SHS
- South Dade SHS
- South Miami SHS
- Southwest Miami High
- Terra Environmental SHS

### Young Women's Preparatory Academy

- Miami Arts Studio @ Zelda Glazer
### Charter Schools

<table>
<thead>
<tr>
<th>Academir Charter School Middle</th>
<th>Mater Academy Charter Middle</th>
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<tr>
<td>Academir Preparatory Academy</td>
<td>Mater Academy Charter Performing Arts</td>
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<tr>
<td>Academy of International Education Charter</td>
<td>Mater Academy Lakes Middle School</td>
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<tr>
<td>Archimedean Middle Conservatory</td>
<td>Mater Academy of International Studies</td>
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<td>Aventura City of Excellence School</td>
<td>Miami Arts Charter School</td>
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<td>Doctors Charter School</td>
<td>Pinecrest Cove Preparatory Academy</td>
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<td>Florida International Academy</td>
<td>Pinecrest Preparatory Middle High</td>
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### Private Schools

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<tr>
<th>Christopher Columbus High School</th>
<th>St. John Neumann Catholic School</th>
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<tr>
<td>Epiphany Catholic School</td>
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<td>Riviera Preparatory School</td>
<td>The Cushman School</td>
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<tr>
<td>Scheck Hillel Community School</td>
<td>Westminster Christian School</td>
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## SECME Olympiad and Festival Schools

### Elementary Schools

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<tr>
<th>School Name</th>
<th>School Name</th>
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<tbody>
<tr>
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<td>George Washington Carver ES</td>
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<td>Archimedes Academy</td>
<td>Gertrude K. Edelman/Sabal Palm ES</td>
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<tr>
<td>Ben Sheppard ES</td>
<td>Greenglade ES</td>
</tr>
<tr>
<td>Bob Graham Education Center</td>
<td>Irving &amp; Beatrice Peskoe K-8 Center</td>
</tr>
<tr>
<td>Comstock ES</td>
<td>Kendale Lakes ES</td>
</tr>
<tr>
<td>Coral Reef ES</td>
<td>Kensington Park Elementary</td>
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<tr>
<td>Cypress K-8 Center</td>
<td>Kinloch Park ES</td>
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<tr>
<td>Dante B. Fasceill ES</td>
<td>Lake Stevens Elementary</td>
</tr>
<tr>
<td>David Lawrence Jr. K-8 Center</td>
<td>M.A. Milam K-8 Center</td>
</tr>
<tr>
<td>Dr. Rolando Espinosa K-8 Center</td>
<td>Madie Ives Community ES</td>
</tr>
<tr>
<td>Earlington Heights ES</td>
<td>Mae M. Walters ES</td>
</tr>
<tr>
<td>Eneida Massas Hartner ES</td>
<td>Mater Academy East Charter</td>
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<tr>
<td>Florida City ES</td>
<td>Maya Angelou ES</td>
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<tr>
<td>Frederick Douglass ES</td>
<td>Norman S. Edelcup/Sunny Isles Beach K-8</td>
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<tr>
<td>Advantage Academy Santa Fe</td>
<td>North Hialeah Gardens Elementary School</td>
</tr>
<tr>
<td>Archimedes Academy</td>
<td>Ojus ES</td>
</tr>
<tr>
<td>Ben Sheppard ES</td>
<td>Palmetto ES</td>
</tr>
<tr>
<td>Bob Graham Education Center</td>
<td>Pinecrest Academy (South)</td>
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<td>Spanish Lake Elementary</td>
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<td>Cypress K-8 Center</td>
<td>Sunset ES</td>
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<tr>
<td>Dante B. Fasceill ES</td>
<td>West Hialeah Gardens Elementary School</td>
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<tr>
<td>David Lawrence Jr. K-8 Center</td>
<td>Winston Park K-8 Center</td>
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<tr>
<td>Dr. Rolando Espinosa K-8 Center</td>
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<tr>
<td>Earlington Heights ES</td>
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<tr>
<td>Eneida Massas Hartner ES</td>
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<td>Florida City ES</td>
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<td>Frederick Douglass ES</td>
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### Middle Schools

<table>
<thead>
<tr>
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<th>School Name</th>
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<tr>
<td>Academy For Intl Ed Charter</td>
<td>Howard D. Mcmillan MS</td>
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<tr>
<td>Archimedes Middle Conservatory</td>
<td>iMater Middle School</td>
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<tr>
<td>Aventura City Of Excellence</td>
<td>Irving &amp; Beatrice Peskoe K-8 Center</td>
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<td>Aventura Waterways K-8 Center</td>
<td>John F. Kennedy MS</td>
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<tr>
<td>Bob Graham Education Center</td>
<td>John I. Smith K-8 Center</td>
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<tr>
<td>Bowman Ashe/Doolin K-8 Academy</td>
<td>Jorge Mas Canosa MS</td>
</tr>
<tr>
<td>Carol City MS</td>
<td>Jose De Diego MS</td>
</tr>
<tr>
<td>Citrus Grove MS</td>
<td>Jose Marti Mast 6-12 Academy</td>
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<tr>
<td>Coral Gables Preparatory Academy</td>
<td>Key Biscayne K-8 Center</td>
</tr>
<tr>
<td>Cutler Bay MS</td>
<td>Kinloch Park MS</td>
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<tr>
<td>Cypress K-8 Center</td>
<td>Lawton Chiles MS</td>
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<td>David Lawrence Jr. K-8 Center</td>
<td>Leewood K-8 Center</td>
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<td>Dr. Rolando Espinosa K-8 Center</td>
<td>Linda Lentin K-8 Center</td>
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<tr>
<td>Eugenia B. Thomas K-8 Center</td>
<td>M.A. Milam K-8 Center</td>
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<tr>
<td>Everglades K-8 Center</td>
<td>Mater Academy Charter Middle</td>
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<td>Everglades Preparatory Academy</td>
<td>Mater Academy East Charter Middle School</td>
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<tr>
<td>Gateway Environmental K-8 Learning Center</td>
<td>Mater Academy Lakes Middle</td>
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<tr>
<td>George Washington Carver MS</td>
<td>Mater Gardens Academy</td>
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<td>Hialeah Gardens Middle School</td>
<td>Miami Arts Studio 6-12 At Zelda Glazer</td>
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<tr>
<td>Hialeah MS</td>
<td>Miami Lakes K-8 Center</td>
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<td>Highland Oaks MS</td>
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### Senior High Schools

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<tr>
<td>Alonzo And Tracy Mourning Senior High Biscayne Bay</td>
<td>Itch @ Thomas A. Edison Ed. Ctr.</td>
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<tr>
<td>American SHS</td>
<td>John A. Ferguson Sr High</td>
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<tr>
<td>Archimedes Upper Conservatory</td>
<td>Jose Marti Mast 6-12 Academy</td>
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<tr>
<td>Booker T. Washington SHS</td>
<td>Mast Academy</td>
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<tr>
<td>Coral Gables SHS</td>
<td>Mater Academy Charter High</td>
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<td>Coral Reef SHS</td>
<td>Mater Academy East Charter</td>
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<tr>
<td>Cutler Bay SHS</td>
<td>Mater Academy Lakes Middle</td>
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<tr>
<td>Doctors Charter School Of Miami Shores</td>
<td>Medical Academy For Science And Technology</td>
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<tr>
<td>Everglades Preparatory Academy High School</td>
<td>Miami Arts Studio 6-12 At Zelda Glazer</td>
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<td>Felix Varela SHS</td>
<td>Miami Beach SHS</td>
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<td>G. Holmes Braddock SHS</td>
<td>Miami Central SHS</td>
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<td>Hialeah SHS</td>
<td>Miami Coral Park SHS</td>
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<td>Hialeah-Miami Lakes Sr. High</td>
<td>Miami Jackson SHS</td>
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<tr>
<td>International Studies Preparatory Academy</td>
<td>Miami Lakes Educational Center</td>
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<td>Ipreparatory Academy</td>
<td>Miami Palmetto SHS</td>
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<td>Miami Springs SHS</td>
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<td>Miami Sunset SHS</td>
<td>North Miami SHS</td>
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<td>North Miami SHS</td>
<td>Pinecrest Academy Chart Sr</td>
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<td>Pinecrest Academy Charter SHS</td>
<td>Robert Morgan SHS</td>
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<td>Ronald W. Reagan/Doral SHS</td>
<td>South Dade SHS</td>
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<td>Southwest Miami SHS</td>
<td>Terra Environmental Research Institute</td>
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<td>Westland Hialeah SHS</td>
<td>William H. Turner Technical Arts High School</td>
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<td>William H. Turner Technical Arts Academy</td>
<td>Young Men's Preparatory Academy</td>
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<tr>
<td>Young Women's Preparatory Academy</td>
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</tbody>
</table>
Acknowledgements

Miami Dade College, one of the nation’s leading institutions for higher learning, has for decades championed and promoted the academic development of students in Miami-Dade County. Their contribution to the success of this event goes unparalleled to any other. The administrative staff, facility and operations management, and the faculty assigned to assist Miami-Dade County Public Schools (M-DCPS) in launching this event have worked tirelessly throughout the months leading to this day. We are grateful for their great attention to detail, flexibility, and willingness to accommodate all requests.

We would also like to extend a special thank you to Miami Dade College North Campus Students, Staff, Faculty, and Administration.

Dr. Eduardo J. Padron, President, Miami Dade College
Dr. Malou C. Harrison, President, Miami Dade College North Campus
Dr. Heather Belmont, Dean of the School of Science
Dr. Jacqueline Peña, Dean of Academic Affairs
Mr. Fermin Vazquez, Senior Director of Campus Administration
Ms. Georgette Perez, Interim Dean of Students
Mr. Robert Parrondo, Campus Chief Information Officer
Dr. Pablo R. Sacasa, Chairperson Chemistry/Physics/Earth Sciences
Ms. Laura Iglesias, Director, STEM Ladder Grant
Dr. Carolyn Margolin, Student Support and Community Outreach Coordinator, STEM Ladder Grant
Mr. Silvio Parodi, Database and Report Analyst, STEM Ladder Grant
Ms. Rossana Aranda Alvarez, Senior Clerk, STEM TRAC Grant
Mr. Randel Carr, Director, Campus Services

Judges play a vital role in the success of the Miami-Dade STEM Expo and for that reason we want to also express our most sincere gratitude for their time and talent.

Elementary Science Fair Judges

Ms. Akerman, Colonial Drive Elementary
Patricia Alami-Alfau, South Miami Heights ES
Annie Alvarez, Henry S. West Laboratory ES
Alexandra Alvarez, Southwest Miami High
Fernando Alvarez, Florida International University
Marcus Andrade, Florida International University
Paola Angel, Southwest Miami SHS/ Phi Beta Chi
Sandee Apang, Southwest Miami SHS/ Phi Beta Chi
Sponsor
Jennifer Barrios, Miami Senior High School
Janet Berger-Polsky, Natural Bridge ES
Betty Bergnes, Science4Us
Joanne Bethencourt Florida International Univ.
Stephanie Bingham, Patricia and Phillip Frost Museum of Science
Nicole Caballero, Southwest Miami Sr High
Karlisa Callwood, Patricia and Phillip Frost Museum of Science

Javelle Campbell, Barry University
Lori-Ann Caraccia, Crestview Elementary School
Guiselle Castrillo, Florida International University
Victoria Collazo, 3DChimera
Ana Conde FiuTeach
Elizabeth Cunningham, Coral Way K-8
Janet Diaz, Royal Palm Elementary
Katherine Entwisle, Hubert O. Sibley K-8
Kelin Escobar, Miami Senior High School
Alvaro Espinoza-Hueck, Miami Senior High
Ingrid Espinoza-Hueck, Miami Senior High
Gabriela Fernandez, Miami Senior High
Janine Fernandez, Sunset Park Elementary
Trelanie Frazier, YWPA
Lilian Fundora-Pelayo, Florida International Univ
Virginia Gacharna, Florida International Univ
Lucia Galeano, Miami Senior High School
Chelsea Garcia, Miami Senior High School
Rebecca Gavulic, Jack D. Gordon Elementary
Alicia Giraud, Campbell Drive K-8
Anna Guerrero, Virginia A. Boone Highland Oaks
Lianet Hechavaria, Southwest Miami SHS
Adam Hernandez, Florida International University
Laura Hernandez, Southwest Miami Senior High/Phi Beta Chi
Omar Hernandez, Southwest Miami SHS/Phi Beta Chi
Emely Herrera, Miami Senior High School
Nicole Hill, Florida International University
Erick Hueck, Miami Senior High School
Carol Hulland, Patricia and Phillip Frost Museum of Science
Alexander Hussain, 3DChimera
Meredith Jennings, UM-RSMAS
Alexander Jimenez, Norwood Elementary School
Melissa Johnson, Florida International University
Chelle King, Patricia and Phillip Frost Museum of Science
Luís Labiste, Miami Dade College
Elizabeth Lago, Patricia and Phillip Frost Museum of Science
Michelle Larrea, Patricia and Phillip Frost Museum of Science
Louis Lazo, M-DPCS Physical Education and Health Literacy
Laura Lisowski, Bob Graham Education Center
Reiner Lopez, Florida International University
Jonathan Mairena, Southwest Miami Sr High
Espinosa, Maria, FLUTeach
Ana Martin, Joe Hall Elementary School
Timothy McMenemy, Barry University
Alejandra Medina, Southwest Miami Senior / Phi Beta Chi
Idel Mena, Southwest Miami Senior High
Isabella Mendieta, Miami Senior High
Valentina Molina, Miami Senior High
Asbel Morales, Southwest Miami Sr. High
Catherine Morin, BNCEE

Glenda Moton, Science With a Twist
Sergio Norat, Florida International University
Monica Ochoa, Wesley Mathews Elementary
Arlet Ortiz, Southwest Miami High
Roberto Padron, Southwest Miami Sr. High
Alina Parbtani, Florida International University
Martina Perez, Gratigny Elementary
Shirley Pico, Dante Fessell Elementary
Ali Polsky
Calypso Ponce, Miami Senior High
Maya Ponce, Miami Senior High
Jose Porras, Mandarin Lakes K-8 Academy
Trevor Powers, Patricia & Phillip Frost Museum of Science
Shannon Pruden, Florida International University
Walter Puls, 3DChimera
Nayeli Quintana, Spanish Lake Elementary
Anita Quintero, Southwest Miami SHS/Phi Beta Chi
Perri Robinson, Science4Us
Barbara Rodriguez, Flamingo Elementary
Patricia Rodriguez, Cypress Elementary School
Carmen Rodriguez, Patricia and Phillip Frost Museum of Science
Rocio Rodriguez, Miami Senior High
Erick Rodriguez, Miami Senior High
Upal Roy, Patricia and Phillip Frost Museum of Science
Milagro Ruiz, Citrus Grove Elementary
Yaliesperanza, Salazar, F.S. Tucker Elementary
Belkys Salinas, Southwest Senior High
Yairena Sotolongo, Florida International University
Raul Trochez, Miami, Senior High
Yeidy Vargas, Florida International University
Laura Veliz-Palomino, Miami Senior High
Wendy Villavicencio, Florida International University
Mike Walligunda
Carol Warner, Barry University
Hong Yang, Florida International University
Kara Zelenak, Sunset Park Elementary

SECME Olympiad and Festival Judges

Silvia Aday, M-DPCS
Adela Aiguesvives, M-DPCS
Lucretia Allen, Florida Power & Light
Lee Allin, Florida Power & Light
Guethshina Altina, Florida International University
Astrid Alvarez, Florida Power & Light
Andrew Arana, Florida Power & Light
Anthony Armbister, Madison Middle School
Patricia Bernard-Mark, Walter C. Young Middle
Marta Brito-Villani, Miami Dade College
Penny Brooks, Florida International University
Ralph Bryan, M-DPCS
Ariana Bueno, Florida International University
Ninorka Caballero, Miami Dade College
Clive Campbell, Florida Power & Light
Yunier Cervino Oliver, VPA

Jorge Cisternas, FIU Aerospace Engineering Club
Jerome Cole, Hialeah Middle School
Teresa Colon, VPA
Claudette Connor
Amanda Del Risco, Florida International University
Ricardo Delgado, Robert Morgan Educational Center & Technical College
Maria Teresa Diaz-Gonzalez, M-DPCS
Nadia Earl, Museum Education Program
Priscilla Ejimofor, Florida Power & Light
Melissa Fernandez, M-DPCS
Karen Gant, Lake Stevens Elementary
Alex Garrido, Hialeah Gardens Sr. High
Racquel Gibson, M-DPCS
Leandra Gonzalez, Florida International University
Annie Kian, M-DPCS
South Florida Regional Science and Engineering Fair Judges

German Acosta Quiros, University of Miami:
American Institute of Aeronautics and Astronautics
Virgil Acuna, Florida International University
Denise Alfaro, M-DCPS Sylvania Heights Elementary School
Jose Almeida, M-DCPS
Noam Alperin, University of Miami
Brandon Aquino, Florida International University
William Arata, U.S.N.A. Alumni Association
Nathan Balukoff, University of Miami Miller School of Medicine American Physican Scientist Association Local Chapter
Maria Banasco, Florida International University
Edmundo Barriga, Florida International University
Sigma Pi Sigma
Gladys Barrio, M-DCPS
Stephen Baumal, AECOM
Jade Bennett, Florida International University
Caroline Betances, Florida International University
Vania Boeva, M-DCPS North Miami Beach Senior High School
Henry Briceno, Florida International University SERC
Marta Brito-Villani, Miami Dade College
David Buncher, M-DCPS Michael Krop High School
Anna Bystrik, University of Miami
Carlos Cabrera, Florida International University
Louis Cai, University of Miami
Irene Calizo, Florida International University
Joseph Callaway, M-DCPS Winston Park K-8
Isabelle Camille, M-DCPS
Sabrina Caneja, Florida International University
Manuel Carames, Miami Dade College - North Campus
Lazaro Carballo, Florida International University
Mario Carcamo, Florida International University
Vivienne Carrasco, University of Miami, Office of the Vice Provost for Research
Juan Carlos Catala, Miami Dade College
Maria Cendon, Miami Dade College
Vanessa Sanchez, NextEra Energy
Odalys Sanchez-Reyes, G. Holmes Braddock Senior
Adam Santone, Florida State University
William Simpson, Florida State University
Yairen Sotolongo, Florida International University
Yaday StFort, Ludovici and Orange Consulting Engineers
Maria Trujillo, M-DCPS
Alexandre Uribe, Miami Dade College - The Idea Center
Rachana Vidhi, NextEra Energy
Pamela Wentworth, M-DCPS
Michelle White, M-DCPS
Ivan Yaeger, The Yaeger Foundation
Mara Zapata, Miami Dade College
Carolina Zavala, M-DCPS

Matthew Chacko, Florida International University
Marcia Chisholm, M-DCPS Law Enforcement Officers' Memorial HS
Rhea Choi, University of Miami Miller School of Medicine American Physican Scientist Association Local Chapter
Kayasa Cobb, M-DCPS Miami Central Senior High School
Charles Cohan, University of Miami Miller School of Medicine
Victoria Collazo, 3DChimera
Claudette Connor, M-DCPS
Tyler Cunningham, University of Miami Miller School of Medicine American Physican Scientist Association Local Chapter
Deannie Curry, M-DCPS Palm Springs Middle School

Diego Deleon, University of Miami SONHS
Jorge Damas, 3DChimera
J Erich Dautel, Florida International University Agroecology
Grace Deehl, Florida International University
Rhea Choi, University of Miami Miller School of Medicine American Physican Scientist Association Local Chapter
Jewelyn dela Cruz, M-DCPS Ronald W. Reagan/Doral Senior High School
Don Deresz, Currency Exchange International (CXI)
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Dionne Dickson
Chris Driver, Marine Reaources Development Foundation

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Harold Elosegui, AT&T/ENGINEERING
Tolga Erbora, Florida International University
Maria F Espinosa, Florida International University
Derek Essegeian, University of Miami Miller School of Medicine American Physican Scientist Association Local Chapter
Regis Estrada, Florida International University Society of Physics Students
Nicole Fierro, Florida International University
Gerald Flourney, Pearson
Gwendolyn Foote, M-DCPS Nautilus Middle School
All great academic achievements are supported and guided by those who share our passion for education. Miami-Dade County Public Schools would like to thank the organizations and individuals who have so consistently encouraged and sponsored our students’ efforts.

3DChimera
American Meteorological Society
American Psychological Association
Arizona State University Rob & Melani Walton Sustainability Solutions
ASM Material Education Foundation
Association for Women Geoscientists
Broadcom Masters
CPO Science
Dade County Science Teachers Association
Discovery Education
Elisa Juarez
ExploreLearning, Gizmos
Fairchild Tropical Botanic Garden
Florida Association of Science Teachers
Florida International University Agroecology Program
Florida International University Biomedical Engineering Program
FPL
Friends of the Science Fair
Genius Olympiad
INTEL Excellence in Computer Science
INTEL ISEF
INTEL Science Talent Search
I-SWEEEP
Miami-Dade College - North Campus
Mu Alpha Theta
NAACP
NASA
National Oceanic and Atmospheric Administration
NOVA Southeastern University Physician Assistant Program
Office of Naval Research - Department of U. S. Navy
Patricia and Phillip Frost Museum of Science
Ricoh Corporation
SECME
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U. S. ARMY
U. S. Naval Academy Alumni Association
U.S. Air Force
U.S. Metric Association
Yale Science and Engineering Association, Inc
We would also like to thank all of those Miami-Dade County Public Schools’ individuals who assisted in the delivery of today’s event. Without the professional knowledge and commitment to excellence from staff on board, today would not be possible.

### Miami-Dade STEM Expo Competition Coordinators

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<thead>
<tr>
<th>Division of Academics</th>
<th>Cristian Carranza</th>
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<tr>
<td></td>
<td>Administrative Director, STEAM</td>
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<tr>
<td><strong>Department of Science</strong></td>
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<td>Ava D. Rosales, PhD</td>
<td>Executive Director, Science</td>
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<td>Dane Jaber, Instructional Supervisor</td>
<td>Millard E. Lightburn, PhD, District Supervisor</td>
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<td>Sebastian Oddone, District Supervisor</td>
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### Miami-Dade STEM Expo Support Staff

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<tr>
<th>Division of Academics</th>
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<tr>
<td>Lupe Diaz, PhD</td>
<td>Executive Director, Career and Technical Education (CTE)</td>
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<td>Michelle R. White</td>
<td>Executive Director, Mathematics</td>
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<td>Silvia Aday, Instructional Supervisor, Mathematics</td>
<td>CTE</td>
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<td>Diana Collingwood, District Supervisor, CTE</td>
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<td>Maria T. Diaz-Gonzalez, District Supervisor, Mathematics</td>
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<td>Melissa Fernandez, District Supervisor, CTE</td>
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<td>Annie Klian, District Supervisor, Mathematics</td>
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<td>Mabel Morales, District Supervisor, VPA</td>
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<td>Sherrilyn Scott, PhD, District Supervisor, Social Science</td>
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<td>Nestor Marcia, District Analyst, STEAM</td>
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<td>Adela M. Aiguesvives, Science Teacher, Biscayne Nature Center</td>
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<td>Vanessa Baker, Curriculum Support Specialist, Science</td>
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<td>Maribel Bernat, Curriculum Support Specialist – SECME Stars III Project Director</td>
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<td>Ralph Bryan, Curriculum Support Specialist, CTE</td>
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<td>Noreyda Casanas, Curriculum Support Specialist, Science</td>
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<td>Eddie Chavez, Curriculum Support Specialist, Mathematics</td>
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<td>Racquel Gibson, Curriculum Support Specialist, Mathematics</td>
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<td>Pamela Lopez, Curriculum Support Specialist, CTE</td>
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<td>Maria Maguire, Curriculum Support Specialist, Mathematics</td>
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<td>Raquel McKinnon, Curriculum Support Specialist, Mathematics</td>
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<td>Catherine Morin, Science Teacher, Biscayne Nature Center</td>
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<td>Yusimi Osteen, Curriculum Support Specialist, Science</td>
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<td>Joseph Petty, Science Teacher, District</td>
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<td>Alina Rodriguez, VPA</td>
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<td>Maria Rubio, Curriculum Support Specialist, Mathematics</td>
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<td>Maria Trujillo, Curriculum Support Specialist, Mathematics</td>
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<td>Matthew Sabatella, Curriculum Support Specialist, VPA</td>
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<td>Mary S. Tweedy, Curriculum Support Specialist, Science</td>
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<td>Julien Zaragoza, Science Teacher, Biscayne Nature Center</td>
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| Mildred K. Farber, District Administrative Assistant | Merlyn Rodriguez, Secretary |
Division of Academic Support and Education Transformation Office
    Gladys Barrio, PhD, District Supervisor – Science
    Ileana Sosa, EdD, District Supervisor – Science
    Melissa Martinez, District Supervisor - Science

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    Peter Hotung, Instructional Support Specialist, IT
    Pamela Wentworth, Curriculum Support Specialist, IT

    Facilities Operation, Maintenance
    Edward Velez, Director 1

    Miami-Dade Schools Police Department

    Miami-Dade STEM Expo
    Performers

    Marcelo Araujo-Cox, Student –Miami Beach Senior High
    Miami Central Senior High School Color Guard, Major Charles Council
    Miami Central Senior High School Marching Rockets, Mr. John McMinn – Director of Bands

    Palmetto Elementary Jazz Band

    Piano Slam
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**Title VI of the Civil Rights Act of 1964** - prohibits discrimination on the basis of race, color, religion, or national origin.

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**Title IX of the Education Amendments of 1972** - prohibits discrimination on the basis of gender.

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**The Equal Pay Act of 1963 as amended** - prohibits gender discrimination in payment of wages to women and men performing substantially equal work in the same establishment.

**Section 504 of the Rehabilitation Act of 1973** - prohibits discrimination against the disabled.

**Americans with Disabilities Act of 1990 (ADA)** - prohibits discrimination against individuals with disabilities in employment, public service, public accommodations and telecommunications.

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**Florida Educational Equity Act (FEEA)** - prohibits discrimination on the basis of race, gender, national origin, marital status, or handicap against a student or employee.

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**Boy Scouts of America Equal Access Act of 2002** – no public school shall deny equal access to, or a fair opportunity for groups to meet on school premises or in school facilities before or after school hours, or discriminate against any group officially affiliated with Boy Scouts of America or any other youth or community group listed in Title 36 (as a patriotic society).

**Veterans** are provided re-employment rights in accordance with P.L. 93-508 (Federal Law) and Section 295.07 (Florida Statutes), which stipulate categorical preferences for employment.

**In Addition:**

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