DADE COUNTY SCIENCE TEACHERS' ASSOCIATION

and

Miami-Dade County Public Schools
Department of Science

Present

STEM

Spotlight on Science
Special Thanks

The Dade County Science Teachers’ Association and Miami-Dade County Public Schools’ Department of Science wish to extend our sincerest thanks and appreciation to Mr. Benny Valdes, Principal of Miami Senior High School, for hosting our 2016 STEM Conference:

STEM: Spotlight on Science
# 2016 Conference

**STEM: Spotlight on Science**

Hosted by

Dade County Science Teachers’ Association and the Department of Science

February 16, 2016

Miami Senior High School
2450 SW 1st Street
Miami, Florida 33135

---

## Conference Schedule

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
</table>
| 7:45–8:30 am  | Registration and Visit with Vendors  
Coffee & Pastries compliments of Vendors  
Choose your two sessions for Breakout Sessions 3 & 4 | Cafeteria         |
| 8:30–9:20 am  | Keynote Speaker                                                       | Auditorium        |
| 9:30–11:25 am | Sessions 1 & 2: Department of Science                                | Classrooms        |
| 11:25–12:25 pm| Box Lunches compliments of Pearson  
Networking with the Vendors & Door Prizes                           | Cafeteria         |
| 12:30–1:25 pm | Session 3: Breakout Sessions                                          | Classrooms        |
| 1:35–2:30 pm  | Session 4: Breakout Sessions                                          | Classrooms        |
| 2:35–3:30 pm  | Session 5: Department of Science                                      | Classrooms        |
Denisse Aranda, recently named one of New York Time’s Women in the World, is a Contamination Control Engineer (CCE) and Planetary Protection Specialist at NASA Langley Research Center Engineering Directorate. She works in the Systems Integration and Test Branch whose mission is to provide world class assembly, integration, and test (AI&T) support to a wide variety of aerospace projects, including fundamental research, engineering development, and flight qualification throughout the terrestrial, extra-terrestrial, launch, space, and EDL environments.

Denisse is currently on detail to Office of Education where she leads the Rockets to Racecars™ program: a NASA, NASCAR, and Jimmie Johnson Racing (JJR) partnership to provide STEM content at racetracks all over the countries.

She earned her Bachelor in Mechanical Engineering with a minor in mathematics in May 2010 from Florida International University (FIU). In December 2012, Denisse completed her Master’s degree in Material Science and Engineering from Virginia Tech.

Denisse’s passion for space, education, and the agency earned her selection as a NASA Ambassador and a NASA FIRST 2015 graduate. As part of her outreach efforts, she has been featured in NBC, New York Times, VICE, Broadly, MSNBC, Daily Press, Tu Voz, Miami Herald, and Univision.
### Sessions and Room Numbers

**Sessions 1 and 2**  
9:30 – 11:25 am

<table>
<thead>
<tr>
<th>Name of Presenter</th>
<th>Grade Level</th>
<th>Presentation Name</th>
<th>Room #</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department of Science</td>
<td>K</td>
<td>Science – Grades K STEM Session 4</td>
<td>3206</td>
</tr>
<tr>
<td>Department of Science</td>
<td>1</td>
<td>Science – Grades 1 STEM Session 4</td>
<td>3207</td>
</tr>
<tr>
<td>Department of Science</td>
<td>2 A</td>
<td>Science – Grades 2 STEM Session 4</td>
<td>3208</td>
</tr>
<tr>
<td>Department of Science</td>
<td>2 B</td>
<td>Science – Grades 2 STEM Session 4</td>
<td>3209</td>
</tr>
<tr>
<td>Department of Science</td>
<td>3 A</td>
<td>Science – Grades 3 STEM Session 4</td>
<td>3210</td>
</tr>
<tr>
<td>Department of Science</td>
<td>3 B</td>
<td>Science – Grades 3 STEM Session 4</td>
<td>3211</td>
</tr>
<tr>
<td>Department of Science</td>
<td>4 A</td>
<td>Science – Grades 4 STEM Session 4</td>
<td>3212</td>
</tr>
<tr>
<td>Department of Science</td>
<td>4 B</td>
<td>Science – Grades 4 STEM Session 4</td>
<td>3213</td>
</tr>
<tr>
<td>Department of Science</td>
<td>5 A</td>
<td>Science – Grade 5 STEM Session 4</td>
<td>3224</td>
</tr>
<tr>
<td>Department of Science</td>
<td>5 B</td>
<td>Science – Grade 5 STEM Session 4</td>
<td>3225</td>
</tr>
<tr>
<td>Department of Science</td>
<td>6</td>
<td>Science – Grade 6 STEM Q3</td>
<td>3228</td>
</tr>
<tr>
<td>Department of Science</td>
<td>7 A</td>
<td>Science – Grade 7 STEM Q3</td>
<td>3330</td>
</tr>
<tr>
<td>Department of Science</td>
<td>7 B</td>
<td>Science – Grade 7 STEM Q3</td>
<td>3331</td>
</tr>
<tr>
<td>Department of Science</td>
<td>8 A</td>
<td>Science – Grade 8 STEM Q3</td>
<td>3328</td>
</tr>
<tr>
<td>Department of Science</td>
<td>8 B</td>
<td>Science – Grade 8 STEM Q3</td>
<td>3329</td>
</tr>
<tr>
<td>Department of Science</td>
<td>Physical Science</td>
<td>Science - Physical Science (STEM Q3-Q4) Repeat</td>
<td>3303</td>
</tr>
<tr>
<td>Department of Science</td>
<td>Biology</td>
<td>Science - Biology (STEM Q3-Q4) Repeat</td>
<td>3311</td>
</tr>
<tr>
<td>Department of Science</td>
<td>Chemistry</td>
<td>Science - Chemistry (STEM Q3-Q4) Repeat</td>
<td>3310</td>
</tr>
<tr>
<td>Department of Science</td>
<td>Physics</td>
<td>Science - Physics (STEM Q3-Q4) Repeat</td>
<td>3309</td>
</tr>
<tr>
<td>Department of Science</td>
<td>6-8</td>
<td>Science – Middle School Leaders Discourse #3</td>
<td>3227</td>
</tr>
<tr>
<td>Department of Science</td>
<td>9-12</td>
<td>Science Leaders Instructional Discourse HS WS 3</td>
<td>3302</td>
</tr>
<tr>
<td>Department of Science</td>
<td>K-12</td>
<td>STEM School Designation (1/2 day sessions)</td>
<td>3121</td>
</tr>
<tr>
<td>Department of Science</td>
<td>K-5</td>
<td>Code.org for Elementary Teachers</td>
<td>1218</td>
</tr>
<tr>
<td>Name of Presenter</td>
<td>Presentation Name</td>
<td>Room #</td>
<td>Page #</td>
</tr>
<tr>
<td>-------------------------</td>
<td>------------------------------------------------------------------------------------</td>
<td>--------</td>
<td>--------</td>
</tr>
<tr>
<td>Chiarella, Rossana</td>
<td>Hands-on Aerospace</td>
<td>3329</td>
<td>9</td>
</tr>
<tr>
<td>Gomez, Navia</td>
<td>STEM made SIMPLE</td>
<td>3212</td>
<td>9</td>
</tr>
<tr>
<td>Guerin, Rebecca</td>
<td>M-DCPS and NIOSH: Partnering to Promote Life Skills for Safe and Healthy Work</td>
<td>3328</td>
<td>9</td>
</tr>
<tr>
<td>Harry, Alexis</td>
<td>Plants vs Dirt</td>
<td>3214</td>
<td>10</td>
</tr>
<tr>
<td>Junco, Mario</td>
<td>Enhancing STEM Curriculum with Gizmos</td>
<td>3211</td>
<td>10</td>
</tr>
<tr>
<td>Kirk, Michelle</td>
<td>Under the Radar: Increasing STEM practices in the classroom.</td>
<td>3210</td>
<td>10</td>
</tr>
<tr>
<td>Klabon, Collen</td>
<td>Future Goals: Hockey Scholar Free STEM Online Resource by EverFi</td>
<td>3209</td>
<td>10</td>
</tr>
<tr>
<td>Lamadrid, Sasha</td>
<td>The “Build-a-Coaster” Outreach Lab</td>
<td>3331</td>
<td>11</td>
</tr>
<tr>
<td>Lapworth, Rick</td>
<td>Winding Up Wind</td>
<td>3309</td>
<td>11</td>
</tr>
<tr>
<td>Mannina, Daniel</td>
<td>The “Freeze-It!” Mobile Outreach Demonstration</td>
<td>3330</td>
<td>11</td>
</tr>
<tr>
<td>Pearson, Mindy</td>
<td>Engineering Design Challenges in the STEM Classroom</td>
<td>3225</td>
<td>11</td>
</tr>
<tr>
<td>Phillips, Birgith</td>
<td>Using Video Editing from their Cell Phone</td>
<td>3311</td>
<td>12</td>
</tr>
<tr>
<td>Shlachtman, Pam</td>
<td>Grading the AP Exam</td>
<td>3303</td>
<td>12</td>
</tr>
<tr>
<td>Teas, James</td>
<td>Miami’s Endangered Pine Rocklands Species</td>
<td>3310</td>
<td>12</td>
</tr>
<tr>
<td>Todd-Gibson, Dr. Christine</td>
<td>An Examination of How Middle School Science Teachers Conduct Collaborative Inquiry and Reflection about Students Conceptual Understanding</td>
<td>3207</td>
<td>12</td>
</tr>
<tr>
<td>Vazquez, Bertha</td>
<td>Evolution for Middle School Teachers</td>
<td>3228</td>
<td>13</td>
</tr>
<tr>
<td>Whitney, Sharry</td>
<td>Claim-Evidence-Reasoning: The Value of Scientific Explanations in the STEM Classroom</td>
<td>3224</td>
<td>13</td>
</tr>
<tr>
<td>Williams-Clermont, Angela</td>
<td>STEM Project Ideas to Compliment Science Content</td>
<td>3206</td>
<td>13</td>
</tr>
<tr>
<td>Williamson, Neil</td>
<td>How to use Edgenuity’s Data Reports to guide student interventions</td>
<td>3208</td>
<td>13</td>
</tr>
<tr>
<td>Yasenka, Robb</td>
<td>LabDisc – Inquiry Based Learning Was Never So Easy</td>
<td>3213</td>
<td>14</td>
</tr>
<tr>
<td>Zaragoza, Dr. Julien</td>
<td>BNC Environmental Education: Meadow Organisms and Native Species Talk</td>
<td>3215</td>
<td>14</td>
</tr>
<tr>
<td>Name of Presenter</td>
<td>Presentation Name</td>
<td>Room #</td>
<td>Page #</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------------------------------------------------------------------------------</td>
<td>--------</td>
<td>--------</td>
</tr>
<tr>
<td>Bergnes, Betty</td>
<td>Digital Resources to Build a Solid S.T.E.M. Foundation in Your Early Elementary Classroom</td>
<td>3206</td>
<td>15</td>
</tr>
<tr>
<td>Camille, Isabelle</td>
<td>H2Go</td>
<td>3303</td>
<td>15</td>
</tr>
<tr>
<td>Chiarella, Rossana</td>
<td>Hands-on Aerospace</td>
<td>3329</td>
<td>15</td>
</tr>
<tr>
<td>Garcia, Dr. Guillermo</td>
<td>Growth Mindset and scientific Inquiry in the classroom</td>
<td>3207</td>
<td>15</td>
</tr>
<tr>
<td>Greenspan, Yvette</td>
<td>Steps toward STEM</td>
<td>3212</td>
<td>16</td>
</tr>
<tr>
<td>Guerin, Rebecca</td>
<td>M-DCPS and NIOSH: Partnering to Promote Life Skills for Safe and Healthy Work</td>
<td>3328</td>
<td>16</td>
</tr>
<tr>
<td>Harry, Alexis</td>
<td>Can we Fly!</td>
<td>3214</td>
<td>16</td>
</tr>
<tr>
<td>Junco, Mario</td>
<td>Addressing Nature of Science and Scientific Inquiry with Gizmos</td>
<td>3211</td>
<td>16</td>
</tr>
<tr>
<td>Kirk, Michelle</td>
<td>Under the Radar: Increasing STEM practices in the classroom.</td>
<td>3210</td>
<td>17</td>
</tr>
<tr>
<td>Klabon, Collen</td>
<td>Future Goals: Hockey Scholar Free STEM Online Resource by EverFi</td>
<td>3209</td>
<td>17</td>
</tr>
<tr>
<td>Lamadrid, Sasha</td>
<td>The “Build-a-Coaster” Outreach Lab</td>
<td>3311</td>
<td>17</td>
</tr>
<tr>
<td>Lapworth, Rick</td>
<td>Winding Up Wind</td>
<td>3309</td>
<td>17</td>
</tr>
<tr>
<td>Mannina, Daniel</td>
<td>The “Freeze-It!” Mobile Outreach Demonstration</td>
<td>3330</td>
<td>18</td>
</tr>
<tr>
<td>Pearson, Mindy</td>
<td>Engineering Design Challenges in the STEM Classroom</td>
<td>3225</td>
<td>18</td>
</tr>
<tr>
<td>Phillips, Birgith</td>
<td>Using Video Editing from their Cell Phone</td>
<td>3311</td>
<td>18</td>
</tr>
<tr>
<td>Teas, James</td>
<td>Miami’s Endangered Pine Rocklands Species</td>
<td>3310</td>
<td>18</td>
</tr>
<tr>
<td>Vazquez, Bertha</td>
<td>Evolution for Middle School Teachers</td>
<td>3228</td>
<td>19</td>
</tr>
<tr>
<td>Whitney, Sharry</td>
<td>Claim-Evidence-Reasoning: The Value of Scientific Explanations in the STEM Classroom</td>
<td>3224</td>
<td>19</td>
</tr>
<tr>
<td>Williamson, Neil</td>
<td>How to use Edgenuity’s Data Reports to guide student interventions</td>
<td>3208</td>
<td>19</td>
</tr>
<tr>
<td>Yasenka, Robb</td>
<td>LabDisc – Inquiry Based Learning Was Never So Easy</td>
<td>3213</td>
<td>19</td>
</tr>
</tbody>
</table>
# Session 5
2:35 – 3:30 pm

<table>
<thead>
<tr>
<th>Name of Presenter</th>
<th>Grade Level</th>
<th>Presentation Name</th>
<th>Room #</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department of Science</td>
<td>K</td>
<td>Science – Grades K STEM Session 4</td>
<td>3206</td>
</tr>
<tr>
<td>Department of Science</td>
<td>1</td>
<td>Science – Grades 1 STEM Session 4</td>
<td>3207</td>
</tr>
<tr>
<td>Department of Science</td>
<td>2 A</td>
<td>Science – Grades 2 STEM Session 4</td>
<td>3208</td>
</tr>
<tr>
<td>Department of Science</td>
<td>2 B</td>
<td>Science – Grades 2 STEM Session 4</td>
<td>3209</td>
</tr>
<tr>
<td>Department of Science</td>
<td>3 A</td>
<td>Science – Grades 3 STEM Session 4</td>
<td>3210</td>
</tr>
<tr>
<td>Department of Science</td>
<td>3 B</td>
<td>Science – Grades 3 STEM Session 4</td>
<td>3211</td>
</tr>
<tr>
<td>Department of Science</td>
<td>4 A</td>
<td>Science – Grades 4 STEM Session 4</td>
<td>3212</td>
</tr>
<tr>
<td>Department of Science</td>
<td>4 B</td>
<td>Science – Grades 4 STEM Session 4</td>
<td>3213</td>
</tr>
<tr>
<td>Department of Science</td>
<td>5 A</td>
<td>Science – Grade 5 STEM Session 4</td>
<td>3224</td>
</tr>
<tr>
<td>Department of Science</td>
<td>5 B</td>
<td>Science – Grade 5 STEM Session 4</td>
<td>3225</td>
</tr>
<tr>
<td>Department of Science</td>
<td>6</td>
<td>Science – Grade 6 STEM Q3</td>
<td>3228</td>
</tr>
<tr>
<td>Department of Science</td>
<td>7 A</td>
<td>Science – Grade 7 STEM Q3</td>
<td>3330</td>
</tr>
<tr>
<td>Department of Science</td>
<td>7 B</td>
<td>Science – Grade 7 STEM Q3</td>
<td>3331</td>
</tr>
<tr>
<td>Department of Science</td>
<td>8 A</td>
<td>Science – Grade 8 STEM Q3</td>
<td>3328</td>
</tr>
<tr>
<td>Department of Science</td>
<td>8 B</td>
<td>Science – Grade 8 STEM Q3</td>
<td>3329</td>
</tr>
<tr>
<td>Department of Science</td>
<td>Physical Science</td>
<td>Science - Physical Science (STEM Q3-Q4) Repeat</td>
<td>3303</td>
</tr>
<tr>
<td>Department of Science</td>
<td>Biology</td>
<td>Science - Biology (STEM Q3-Q4) Repeat</td>
<td>3311</td>
</tr>
<tr>
<td>Department of Science</td>
<td>Chemistry</td>
<td>Science - Chemistry (STEM Q3-Q4) Repeat</td>
<td>3310</td>
</tr>
<tr>
<td>Department of Science</td>
<td>Physics</td>
<td>Science - Physics (STEM Q3-Q4) Repeat</td>
<td>3309</td>
</tr>
<tr>
<td>Department of Science</td>
<td>6-8</td>
<td>Science – Middle School Leaders Discourse #3</td>
<td>3227</td>
</tr>
<tr>
<td>Department of Science</td>
<td>9-12</td>
<td>Science Leaders Instructional Discourse HS WS 3</td>
<td>3302</td>
</tr>
<tr>
<td>Department of Science</td>
<td>K-12</td>
<td>STEM School Designation (1/2 day sessions)</td>
<td>3121</td>
</tr>
<tr>
<td>Department of Science</td>
<td>K-5</td>
<td>Code.org for Elementary Teachers</td>
<td>1218</td>
</tr>
</tbody>
</table>
# Breakout Session 3

## 12:30 – 1:25 pm

### Hands-on Aerospace

**Presented by:** Chiarella, Rossana

<table>
<thead>
<tr>
<th>Room: 3329</th>
<th>Category: Demonstration/Interactive Hands On/Make &amp; Take</th>
<th>Audience: Primary Intermediate Middle</th>
<th>Content: Science Engineering Art Mathematics</th>
</tr>
</thead>
</table>

This aerospace project teaches the fundamental principles of math, physics, and science by demonstrating their application in the world of aeronautics and astronautics. The activity will help to learn about basic aircraft design and to explore the effects of the four forces of flight and understand the effect of air by unifying concepts and processes of Bernoulli’s principle by constructing a flying model glider to determine weight and balance of a glider. Also, this fun activity is designed to study one of history’s greatest aviation pioneers named Charles A. Lindbergh who did many achievement in aviation and gave his assistance to others. The simple airplane who will represent the little Spirit of St. Louis will capture the students’ attention and will provide information where the students will always remember the story.

### STEM made SIMPLE

**Presented by:** Gomez, Navia

<table>
<thead>
<tr>
<th>Room:</th>
<th>Category: Demonstration Interactive</th>
<th>Audience: Primary Intermediate</th>
<th>Content: Science Technology Engineering Art</th>
</tr>
</thead>
</table>

Afraid to teach Science/STEM? Still not sure what STEM is or how to implement it in your classroom? Have no fear Science/STEM made SIMPLE is here! Workshop will include learning how to integrate STEM in your classroom by doing simple, hands-on activities that will build your confidence and enhance your student’s love for all things Science! Participants will be able to make a simple windmill, lunar lander, geometric shapes, parachutes and learn how to take the "E" in STEM "Home" to encourage student/parent collaboration and participation.

### M-DCPS and NIOSH: Partnering to Promote Life Skills for Safe and Healthy Work

**Presented by:** Guerin, Rebecca, Okun, Andrea, & Dewey, Robin

<table>
<thead>
<tr>
<th>Room: 3328</th>
<th>Category: Demonstration Interactive Hands On/Make &amp; Take</th>
<th>Audience: 8th Grade Only</th>
<th>Content: Science</th>
</tr>
</thead>
</table>

Did you know that every minute, a young person in the United States is hurt on the job? These injuries are tragic, but also predictable and preventable. That is why M-DCPS is collaborating with the National Institute for Occupational Safety and Health (NIOSH), part of the Centers for Disease Control and Prevention (CDC), to give students vital skills they need to stay safe and healthy on the job. Personal Health and Safety in the Workplace (HUMAN GROWTH AND DEVELOPMENT unit) is now part of the District Pacing Guide for Comprehensive Science 3. NIOSH/CDC has created a free, customized, curriculum for M-DCPS for use in your 8th grade science classes. The 4 lessons introduce students to workplace safety and health knowledge and skills. Each lesson can be taught in one class period and covers the recommended material for teaching Personal Health and Safety in the Workplace. Join us to learn more about this curriculum and to receive FREE copies of all the Talking Safety instructional materials (a teacher’s manual, PowerPoint presentation, and student certificate of participation). You can also learn how to sign up for the NIOSH study and earn some extra money for your teaching!
### Plants vs Dirt

Presented by: Harry, Alexis

|------------|--------------------------------|-------------------------------|-----------------------------------------------|

Can we grow plants without dirt? Hydroponics is a technology for growing plants without soil. This workshop gives teachers a foundation of this fascinating technology through the eyes of STEM that can be used in the classroom.

### Enhancing STEM Curriculum with Gizmos

Presented by: Junco, Mario

<table>
<thead>
<tr>
<th>Room: 3211</th>
<th>Category: Demonstration/Interactive</th>
<th>Audience: Intermediate High</th>
<th>Content: Science Biology</th>
</tr>
</thead>
</table>

Gizmos are a perfect solution for teachers looking for ways to enhance their STEM curriculum and build 21st century skills for students. This session is excellent for Science and STEM/STEAM teachers in grades 3 and up who have completed Initial Training and would like advanced training on incorporating best practices for engaging students in scientific investigation and the practice of design.

### Under the Radar: Increasing STEM practices in the classroom.

Presented by: Kirk, Michelle

<table>
<thead>
<tr>
<th>Room: 3210</th>
<th>Category: Hands-On/Make &amp; Take</th>
<th>Audience: Middle High</th>
<th>Content: Science Biology Chemistry Physical Science</th>
</tr>
</thead>
</table>

In this workshop participants will experience hands-on science content through a series of learning stations which can easily replace the traditional teaching methods of lecturing, reading, and testing. When teachers combine specific classroom science strategies in stations, they can easily differentiate their classroom and tier assignments to meet the needs of their students. In addition, students will increase their reading and writing skills as they work through the stations and the activities. Equally important, using stations in classrooms promotes real-world applications and best practices aligned to all of the STEM concepts.

### Future Goals: Hockey Scholar Free STEM Online Resource by EverFi

Presented by: Klabon, Collen & Adrianson, Laura

|------------|------------------------------------|-----------------------------|-----------------------------------------------|

This is a special training opportunity for a new web-based STEM resource offered for grades 4-8. Hockey Scholar is an online learning course, available at no cost that uses the exciting game of hockey as a learning vehicle to help students understand the real world applications of Science, Technology, Engineering, and Math (STEM) principles.
## The “Build-a-Coaster” Outreach Lab

**Presented by:** Lamadrid, Sasha & Gonzalez, Eddie

<table>
<thead>
<tr>
<th>Room: 3331</th>
<th>Category: Hands On/Make &amp; Take</th>
<th>Audience: ALL</th>
<th>Content: Science Technology Engineering Art</th>
</tr>
</thead>
</table>

Hold on tight! Which team of students can engineer and build the best roller coaster using just foam, tape, marbles, and smarts? “Build-a-Coaster” brings engineering and physics to life and ramps up the focus with competition.

## Winding Up Wind

**Presented by:** Lapworth, Rick

<table>
<thead>
<tr>
<th>Room: 3309</th>
<th>Category: Hands On/Make &amp; Take</th>
<th>Audience: Intermediate Middle High</th>
<th>Content: Science Technology Engineering Physical Science</th>
</tr>
</thead>
</table>

This presentation is a make and take, where participants will make small hand-held windmills. Then they will test them in front of an electric fan, experimenting on which design can do the most work, have the most power, lift an object the fastest. The axle of the windmill will wind up a string that has cups of water at the bottom (the resistance force). This is a great, simple and adaptable project to teach simple machines and the equations for force, work, power and torque to various grade levels.

## The “Freeze-It!” Mobile Outreach Demonstration

**Presented by:** Mannina, Daniel & Castro, Maria Gabriela

<table>
<thead>
<tr>
<th>Room: 3330</th>
<th>Category: Demonstration/Interactive</th>
<th>Audience: Primary Intermediate Middle High</th>
<th>Content: Science Chemistry Physical Science Earth Science</th>
</tr>
</thead>
</table>

That’s so cool! Objects such as balloons and flowers shatter, explode, or strengthen as we explore the “cool” effects of liquid nitrogen (-325°F!) on everyday items. Unique experiments also include creating indoor clouds and freezing bubbles in midair!

## Engineering Design Challenges in the STEM Classroom

**Presented by:** Pearson, Mindy

<table>
<thead>
<tr>
<th>Room: 3225</th>
<th>Category: Hands On/Interactive</th>
<th>Audience: ALL</th>
<th>Content: Science Engineering</th>
</tr>
</thead>
</table>

The E in STEM is about using the Engineering Design Process to solve problems. Engineering design challenges bring authentic, real-world applications of science and math concepts to life in your classroom as well as embedding 21st century skills of collaboration, innovation and persistence. Join us for this interactive, engaging, and hands-on session where the EDP is investigated, collaboration and consensus are challenged, and facilitation techniques are modeled for STEM success and student achievement.
### Using Video Editing from their Cell Phone

**Presented by:** Phillips, Birgith

- **Room:** 3311
- **Category:** Panel/ Research/ Discussion
- **Audience:** High
- **Content:** Science Technology
- **Technology
- **Art
- **Biology

Students are often shy to do a presentation in front of a classroom, some their language is limited, or the student rather spend use their cell phone than do a presentation. Therefore, students are encouraged to make a group poster based on a topic to be covered on the EOC, and then each student will present the work topic by video. Other students may be asked to Perform by acting, script writing, and then video the topic, once the topic is covered, they stand in front of the video and explain the purpose or message of the video by using video editing application from their phone. Video must include title, caption, music, and credits. The last group only presents a poster, while explaining it in person or on a video, and test students using Kahoot.

### Grading the AP Exam

**Presented by:** Shlachtman, Pam

- **Room:** 3303
- **Category:** Panel/ research/discussion
- **Audience:** High
- **Content:** AP Environmental Science

A review of the AP Environmental Science 2015 FRQs. Strategies for writing FRQs will also be reviewed.

### Miami’s Endangered Pine Rocklands Species

**Presented by:** Teas, James

- **Room:** 3310
- **Category:** Demonstration/ Interactive
- **Audience:** Intermediate Middle High
- **Content:** Science

This presentation will introduce several endangered species whose habitat is pine rockland. This habitat is threatened due to loss through development and fragmentation. Some species are endemic to Miami-Dade County. Classroom materials will be provided and a link to obtain more.

### An Examination of How Middle School Science Teachers Conduct Collaborative Inquiry and Reflection about Students Conceptual Understanding

**Presented by:** Todd-Gibson, Dr. Christine

- **Room:** 3207
- **Category:** Paper
- **Audience:** ALL
- **Content:** Science Professional Development

This qualitative case study examined how middle school science teachers conducted collaborative inquiry and reflection about students’ conceptual understanding, and how individual teachers in the middle school science group acted and made reflections in response to their collaborative inquiry. It also examined external influences that affected the teachers’ ability to engage in collaborative inquiry. Observational, written, and interview data were collected from observations of teachers’ face-to-face meetings and reflections, individual interviews, a focus group interview, and online reflections. The results of this study revealed that collaborative inquiry is a form of professional development that includes answering curricular questions through observation, communication, action, and reflection. The premise of an inquiry is based on a need with students. Middle school science teachers came to consensus about actions to affect students’ conceptual understanding, took action as stated, and shared their reflections of the actions taken with consideration to current and upcoming school activities. Activities involved teachers brainstorming and sharing with one another, talking about how the variables were merged into their curriculum, and how they impacted students’ conceptual understanding. Teachers valued talking with one another about science content and pedagogy, but did find the inquiry portion of the approach to require more development.
# Evolution for Middle School Teachers

Presented by: Vazquez, Bertha

<table>
<thead>
<tr>
<th>Room: 3228</th>
<th>Category: Demonstration/Interactive Hands-On/Make &amp; Take</th>
<th>Audience: Middle</th>
<th>Content: Science Biology</th>
</tr>
</thead>
</table>

A middle school science teacher will typically cover many areas of science within his/her annual curriculum, including earth science, physical science, and life science. It is virtually impossible to become an expert in all of these areas, at least not initially. The purpose of TIES is to inform interested middle school science teachers about the most up-to-date concepts of natural selection, common ancestry, and diversity in order for them to confidently cover the topics in their classrooms and fulfill their curriculum requirements. In addition to providing science teachers with innovative professional development opportunities, TIES also has ready-to-use online resources for the classroom, including presentation slides, labs, guided reading assignments, and an exam.

# Claim-Evidence-Reasoning: The Value of Scientific Explanations in the STEM Classroom

Presented by: Whitney, Sharry

<table>
<thead>
<tr>
<th>Room: 3224</th>
<th>Category: Hands On/Interactive</th>
<th>Audience: ALL</th>
<th>Content: Science Science Literacy</th>
</tr>
</thead>
</table>

Claim-Evidence-Reasoning is a way for students to explain, in a scientific way, how their observations and data from an investigation are connected to science knowledge. By first analyzing evidence to make a claim statement about what occurred, students are then taught to use scientific reasoning to explain how the claim is connected to what they already know about phenomenon. This acclaimed and highly successful instructional strategy is changing how lab conclusions are written and finally making science investigations meaningful for students.

# STEM Project Ideas to Compliment Science Content

Presented by: Williams-Clermont, Angela

<table>
<thead>
<tr>
<th>Room: 3206</th>
<th>Category: Demonstration/Interactive Hands-On/Make &amp; Take</th>
<th>Audience: Middle High</th>
<th>Content: Science Physical Science</th>
</tr>
</thead>
</table>

Science content may be overwhelming for students at times and may seem purposeless unless students are able to make real-world connections and applications about what they are learning. Discover ways to motivate students by learning a few STEM-related project ideas and hands-on activities that allow students to make these real-world connections. Examples include a solar oven design project idea made from ordinary household products, foam roller coaster model, and ice cream-making techniques that relate to freezing point depression. This workshop is recommended for 6th -10th grades, but may be applicable for older grades as well.

# How to use Edgenuity’s Data Reports to guide student interventions

Presented by: Williamson, Neil

<table>
<thead>
<tr>
<th>Room: 3208</th>
<th>Category: Demonstration/Interactive</th>
<th>Audience: Middle High</th>
<th>Content: Science Biology</th>
</tr>
</thead>
</table>

Participants will learn how to interpret and use Edgenuity's Data Reports to guide student interventions in achieving desirable outcomes.
### LabDisc – Inquiry Based Learning Was Never So Easy

**Presented by:** Yasenka, Robb

<table>
<thead>
<tr>
<th>Room: 3213</th>
<th>Category: Demonstration/Interactive</th>
<th>Audience: Intermediate Middle High</th>
<th>Content: Science</th>
</tr>
</thead>
</table>

Introducing the next generation science data logging device, LabDisc! Join me as I present an exciting new tool for your classroom by performing experiments and quickly analyzing the data. You will be amazed with the simplicity of the wireless data collection and software functionality. Come and see this all-in-one, complete science lab in the palm of your hand. Attendees will receive a voucher for $200 off their school’s first Mobile Science Lab.

### BNC Environmental Education: Meadow Organisms and Native Species Talk

**Presented by:** Zaragoza, Dr. Julien, Aiguesvives, Adela & Morin, Caterina

<table>
<thead>
<tr>
<th>Room: 3215</th>
<th>Category: Demonstration/Interactive Hands On/Make &amp; Take</th>
<th>Audience: Intermediate</th>
<th>Content: Science</th>
</tr>
</thead>
</table>

This presentation includes a description of a variety of marine organisms that live in the seagrass beds along Crandon Park. The discussion will encompass how these organisms survive based on their behavioral and physical adaptations and other characteristics. The discussion will also include a description of the native species of plants that make up the coastal hammock strand and other habitats that make up the Bear Cut Preserve.
## Breakout Session 4

### 1:35 – 2:30 pm

### Digital Resources to Build a Solid S.T.E.M. Foundation in Your Early Elementary Classroom

**Presented by:** Bergnes, Betty, Robinson, Perri & Mercury, Jenna

**Room:** 3303  
**Category:** Demonstration/Interactive  
**Audience:** Primary  
**Content:** Science

A engineering-based project, where students have to build a water filtration or distillation structure from odds and ends material provided by teacher. They must decide which process they are going to use and then build the prototype and test it.

### H2Go

**Presented by:** Camille, Isabelle

**Room:** 3303  
**Category:** Demonstration/Interactive  
**Audience:** High  
**Content:** Science  
Technology  
Engineering  
Chemistry

A engineering-based project, where students have to build a water filtration or distillation structure from odds and ends material provided by teacher. They must decide which process they are going to use and then build the prototype and test it.

### Hands-on Aerospace

**Presented by:** Chiarella, Rossana

**Room:** 3329  
**Category:** Hands On/Make & Take  
**Audience:** Primary  
Intermediate  
Middle  
**Content:** Science  
Engineering  
Art  
Math

This aerospace project teaches the fundamental principles of math, physics, and science by demonstrating their application in the world of aeronautics and astronautics. The activity will help to learn about basic aircraft design and to explore the effects of the four forces of flight and understand the effect of air by unifying concepts and processes of Bernoulli’s principle by constructing a flying model glider to determine weight and balance of a glider. Also, this fun activity is designed to study one of history’s greatest aviation pioneers named Charles A. Lindbergh who did many achievement in aviation and gave his assistance to others. The simple airplane who will represent the little Spirit of St. Louis will capture the students’ attention and will provide information where the students will always remember the story.

### Growth Mindset and scientific Inquiry in the classroom

**Presented by:** Garcia, Dr. Guillermo

**Room:** 3207  
**Category:** Demonstration/Interactive  
**Audience:** Primary  
Intermediate  
Middle  
High  
**Content:** Science  
Technology  
Engineering  
Art

This presentation is an introduction to Growth mindset and how it can impact inquiry in the classroom. This presentation is based on Carol Dweck’s Theory of growth vs. fixed mindset. In this presentation we will look at how what these mindsets are and are not, how we can cultivate a growth mindset in ourselves, our peers and in our learners. We will also be looking at how growth mindset is directly related to inquiry in all STEM fields.
<table>
<thead>
<tr>
<th>Presentation</th>
<th>Presenters</th>
<th>Room</th>
<th>Category</th>
<th>Audience</th>
<th>Content</th>
<th>Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Steps toward STEM</strong></td>
<td>Greenspan, Yvette</td>
<td>3212</td>
<td>Demonstration/Interactive</td>
<td>Intermediate</td>
<td>Science, Technology, Engineering, Art, Math</td>
<td>Join the author of just published, A Guide To Teaching Elementary Science: Ten Easy Steps, who will share her book and classroom activities that engage and inspire students to explore and discover STEM in an exciting and positive learning environment. Learn how you can implement STEM and NGSS through inquiry learning with strategies that will excite and encourage your students to love science and make your science teaching more effective. Conduct a hands-on activity, adaptable to age and ability, showcased in the book that will challenge the natural curiosity of your students and embrace the needs of ALL learners.</td>
</tr>
<tr>
<td><strong>M-DCPS and NIOSH: Partnering to Promote Life Skills for Safe and Healthy Work</strong></td>
<td>Guerin, Rebecca, Okun, Andrea, &amp; Dewey, Robin</td>
<td>3328</td>
<td>Hands-On/Make &amp; Take</td>
<td>8th Grade Only</td>
<td>Mathematics, Science, Interdisciplinary</td>
<td>Did you know that every minute, a young person in the United States is hurt on the job? These injuries are tragic, but also predictable and preventable. That is why M-DCPS is collaborating with the National Institute for Occupational Safety and Health (NIOSH), part of the Centers for Disease Control and Prevention (CDC), to give students vital skills they need to stay safe and healthy on the job. Personal Health and Safety in the Workplace (HUMAN GROWTH AND DEVELOPMENT unit) is now part of the District Pacing Guide for Comprehensive Science 3. NIOSH/CDC has created a free, customized, curriculum for M-DCPS for use in your 8th grade science classes. The 4 lessons introduce students to workplace safety and health knowledge and skills. Each lesson can be taught in one class period and covers the recommended material for teaching Personal Health and Safety in the Workplace. Join us to learn more about this curriculum and to receive FREE copies of all the Talking Safety instructional materials (a teacher’s manual, PowerPoint presentation, and student certificate of participation). You can also learn how to sign up for the NIOSH study and earn some extra money for your teaching!</td>
</tr>
<tr>
<td><strong>Can we Fly!</strong></td>
<td>Harry, Alexis</td>
<td>3214</td>
<td>Hands On/Make &amp; Take</td>
<td>Intermediate</td>
<td>Science, Technology, Engineering, Math</td>
<td>There is more to flying than simply moving though the sky. What does it take to make and object fly? What does it take to create an Airplane? How does airplanes work? This session will help teachers understand airplanes. You will understand the forces of flight how airplanes are able fly through in the air.</td>
</tr>
<tr>
<td><strong>Addressing Nature of Science and Scientific Inquiry with Gizmos</strong></td>
<td>Junco, Mario</td>
<td>3211</td>
<td>Demonstrative/Interactive</td>
<td>Intermediate</td>
<td>Science, Biology</td>
<td>Students struggling with Nature of Science? Do they need guidance with the scientific method? Learn best practices for using Gizmos in scientific inquiry! Teachers will learn how Gizmos can be utilized to have a greater grasp on the Nature of Science as well as scientific literacy and writing conclusions using the CER model.</td>
</tr>
</tbody>
</table>
Under the Radar: Increasing STEM practices in the classroom.

Presented by: Kirk, Michelle
Room: 3210  Category: Hands-On/Make & Take  Audience: Middle High  Content: Science Biology Chemistry Physical Science

In this workshop participants will experience hands-on science content through a series of learning stations which can easily replace the traditional teaching methods of lecturing, reading, and testing. When teachers combine specific classroom science strategies in stations, they can easily differentiate their classroom and tier assignments to meet the needs of their students. In addition, students will increase their reading and writing skills as they work through the stations and the activities. Equally important, using stations in classrooms promotes real-world applications and best practices aligned to all of the STEM concepts.

Future Goals: Hockey Scholar Free STEM Online Resource by EverFi

Presented by: Klabon, Collen & Adrianson, Laura

This is a special training opportunity for a new web-based STEM resource offered for grades 4-8. Hockey Scholar is an online learning course, available at no cost that uses the exciting game of hockey as a learning vehicle to help students understand the real world applications of Science, Technology, Engineering, and Math (STEM) principles.

The “Build-a-Coaster” Outreach Lab

Presented by: Lamadrid, Sasha & Gonzalez, Eddie
Room: 3331  Category: Hands On/Make & Take  Audience: ALL  Content: Science Technology Engineering Art

Hold on tight! Which team of students can engineer and build the best roller coaster using just foam, tape, marbles, and smarts? “Build-a-Coaster” brings engineering and physics to life and ramps up the focus with competition.

Winding Up Wind

Presented by: Lapworth, Rick
Room: 3309  Category: Hands On/Make & Take  Audience: Intermediate Middle High  Content: Science Technology Engineering Physical Science

This presentation is a make and take, where participants will make small hand-held windmills. Then they will test them in front of an electric fan, experimenting on which design can do the most work, have the most power, lift an object the fastest. The axle of the windmill will wind up a string that has cups of water at the bottom (the resistance force). This is a great, simple and adaptable project to teach simple machines and the equations for force, work, power and torque to various grade levels.
### The “Freeze-It!” Mobile Outreach Demonstration

**Presented by:** Mannina, Daniel & Castro, Maria Gabriela  
**Room:** 3330  
**Category:** Demonstration/Interactive  
**Audience:** Primary Intermediate Middle High  
**Content:** Science Chemistry Physical Science Earth Science

That’s so cool! Objects such as balloons and flowers shatter, explode, or strengthen as we explore the “cool” effects of liquid nitrogen (-325°F!) on everyday items. Unique experiments also include creating indoor clouds and freezing bubbles in midair!

### Engineering Design Challenges in the STEM Classroom

**Presented by:** Pearson, Mindy  
**Room:** 3225  
**Category:** Hands On/Interactive  
**Audience:** ALL  
**Content:** Science Engineering

The E in STEM is about using the Engineering Design Process to solve problems. Engineering design challenges bring authentic, real-world applications of science and math concepts to life in your classroom as well as embedding 21st century skills of collaboration, innovation and persistence. Join us for this interactive, engaging, and hands-on session where the EDP is investigated, collaboration and consensus are challenged, and facilitation techniques are modeled for STEM success and student achievement.

### Using Video Editing from their Cell Phone

**Presented by:** Phillips, Birgith  
**Room:** 3311  
**Category:** Panel/ Research/ Discussion Demonstration/Interactive Hands On/Make & Take  
**Audience:** High  
**Content:** Science Technology Art Biology

Students are often shy to do a presentation in front of a classroom, some their language is limited, or the student rather spend use their cell phone than do a presentation. Therefore, students are encouraged to make a group poster based on a topic to be covered on the EOC, and then each student will present the work topic by video. Other students may be asked to Perform by acting, script writing, and then video the topic, once the topic is covered, they stand in front of the video and explain the purpose or message of the video by using video editing application from their phone. Video must include title, caption, music, and credits. The last group only presents a poster, while explaining it in person or on a video, and test the students using Kahoot.

### Miami’s Endangered Pine Rocklands Species

**Presented by:** Teas, James  
**Room:** 3310  
**Category:** Demonstration/Interactive  
**Audience:** Intermediate Middle High  
**Content:** Science

This presentation will introduce several endangered species whose habitat is pine rockland. This habitat is threatened due to loss through development and fragmentation. Some species are endemic to Miami-Dade County. Classroom materials will be provided and a link to obtain more.
### Evolution for Middle School Teachers

**Presented by:** Vazquez, Bertha

**Room:** 3228  
**Category:** Demonstration/Interactive  
**Audience:** Middle  
**Content:** Science Biology

A middle school science teacher will typically cover many areas of science within his/her annual curriculum, including earth science, physical science, and life science. It is virtually impossible to become an expert in all of these areas, at least not initially. The purpose of TIES is to inform interested middle school science teachers about the most up-to-date concepts of natural selection, common ancestry, and diversity in order for them to confidently cover the topics in their classrooms and fulfill their curriculum requirements. In addition to providing science teachers with innovative professional development opportunities, TIES also has ready-to-use online resources for the classroom, including presentation slides, labs, guided reading assignments, and an exam.

### Claim-Evidence-Reasoning: The Value of Scientific Explanations in the STEM Classroom

**Presented by:** Whitney, Sharry

**Room:** 3224  
**Category:** Hands On/Interactive  
**Audience:** ALL  
**Content:** Science  
**Science Literacy**

Claim-Evidence-Reasoning is a way for students to explain, in a scientific way, how their observations and data from an investigation are connected to science knowledge. By first analyzing evidence to make a claim statement about what occurred, students are then taught to use scientific reasoning to explain how the claim is connected to what they already know about phenomenon. This acclaimed and highly successful instructional strategy is changing how lab conclusions are written and finally making science investigations meaningful for students.

### How to use Edgenuity’s Data Reports to guide student interventions

**Presented by:** Williamson, Neil

**Room:** 3208  
**Category:** Demonstration/Interactive  
**Audience:** Middle High  
**Content:** Science Biology

Participants will learn how to interpret and use Edgenuity’s Data Reports to guide student interventions in achieving desirable outcomes.

### LabDisc – Inquiry Based Learning Was Never So Easy

**Presented by:** Yasenka, Robb

**Room:** 3213  
**Category:** Demonstration/Interactive  
**Audience:** Intermediate Middle High  
**Content:** Science

Introducing the next generation science data logging device, LabDisc! Join me as I present an exciting new tool for your classroom by performing experiments and quickly analyzing the data. You will be amazed with the simplicity of the wireless data collection and software functionality. Come and see this all-in-one, complete science lab in the palm of your hand. Attendees will receive a voucher for $200 off their school’s first Mobile Science Lab.
On behalf of all the conference participants, the Dade County Science Teachers’ Association and Miami-Dade County Public Schools’ Department of Science wish to acknowledge the following companies for supporting us with their sponsorship of the delicious meals we all enjoyed today.

Thank you!

**Pearson**

**National Geographic**

**Houghton Mifflin Harcourt**

**Triumph Learning**

**Wards/Sargent-Welch**

**ExporereLearning**

**Science4Us**
Special Sponsorship

Dade County Science Teachers’ Association and Miami-Dade County Public Schools’ Department of Science wish to acknowledge the following companies for their continued support of our organizations, teachers, and education. Without them this conference would not be possible.

<table>
<thead>
<tr>
<th>Vendor</th>
<th>Representative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accelerate Learning</td>
<td>Arlene F. Korr</td>
</tr>
<tr>
<td>Capital Microscope Services Inc.</td>
<td>Sean Sterrett</td>
</tr>
<tr>
<td>Casio America</td>
<td>Iliana Gonzalez</td>
</tr>
<tr>
<td>eCYBERMISSION</td>
<td>NSTA</td>
</tr>
<tr>
<td>Edu Resource Solutions</td>
<td>Sylvia Fumero</td>
</tr>
<tr>
<td>Engaged Learning Solutions</td>
<td>Robb Yasenka</td>
</tr>
<tr>
<td>Everfi</td>
<td>Colleen Klabon</td>
</tr>
<tr>
<td>ExploreLearning</td>
<td>Mario Junco</td>
</tr>
<tr>
<td>Fairchild Tropical Botanic Garden</td>
<td>Kiki Mutis</td>
</tr>
<tr>
<td>Houghton Mifflin Harcourt</td>
<td>Christine Jenkins</td>
</tr>
<tr>
<td>Miami Seaquarium</td>
<td>Analisa Duran, Shannon Jones</td>
</tr>
<tr>
<td>National Geographic/Cengage Learning</td>
<td>Michael Galfond</td>
</tr>
<tr>
<td>Nature’s Natives</td>
<td>Lynne Hudgins</td>
</tr>
<tr>
<td>Pearson</td>
<td>Gerald Flournoy</td>
</tr>
<tr>
<td>School Specialty Science</td>
<td>John Marinake</td>
</tr>
<tr>
<td>Science4Us</td>
<td>Betty Bergnes</td>
</tr>
<tr>
<td>Skillastics</td>
<td><a href="mailto:sslade@skillastidcs.com">sslade@skillastidcs.com</a></td>
</tr>
<tr>
<td>STEM Camp</td>
<td>Dr. Guillermo Garcia</td>
</tr>
<tr>
<td>The Patricia and Phillip Frost Museum of Science</td>
<td>Daniel Mannina</td>
</tr>
<tr>
<td>Triumph Learning</td>
<td>Jorge J. Garcia</td>
</tr>
<tr>
<td>VALIC</td>
<td>Janice Inoa-Srbovan</td>
</tr>
<tr>
<td>Vernier Software &amp; Technology</td>
<td>Gary Myers</td>
</tr>
<tr>
<td>Ward’s / Sargent-Welch</td>
<td>Michelle Kirk</td>
</tr>
</tbody>
</table>
DADE COUNTY SCIENCE TEACHERS’ ASSOCIATION

Executive Board
President: Dr. Erick M. Hueck
First Vice President: Mary Tweedy
Second Vice President: Dr. Marcie Bosseler
Third Vice President: Stella Summers
Treasurer: Dr. Yvette Greenspan
Executive Director: Dr. Gary A. Yoham
Elementary Teachers’ Liaison: Navia Gomez
Middle School Teachers’ Liaison: John Soderholm
High School Teachers’ Liaison: Amy Leonard
M-DCPS Liaison: Dr. Millard Lightburn

Miami Dade County Public Schools’ Department of Science
Dr. Ava D. Rosales, Executive Director
Mr. Dane Jaber, Middle School Supervisor
Dr. Millard Lightburn, Elementary Supervisor
Mr. Sebastian Oddone, High School Supervisor
Ms. Vanessa Baker, Curriculum Support Specialist
Mrs. Noreyda Casañas, Curriculum Support Specialist
Mr. Daniel Gangeri, Curriculum Support Specialist
Ms. Cindy Jolicoeur, Curriculum Support Specialist
Mrs. Yusimi O’Steen, Curriculum Support Specialist
Ms. Mary Tweedy, Curriculum Support Specialist
Today’s Students... Tomorrow’s Innovators!

Pearson’s Project STEM for grades K–8 provides materials that make it easy for teachers to integrate STEM seamlessly into existing curricula and instruction. Through 18 topics and accompanying program guides, Project STEM works with any elementary or middle grades science program. Each module follows the same format: Introduce, Teach, and Evaluate. Topics cover Life, Earth, and Physical sciences and illustrate how the four STEM areas are connected through hands-on labs, projects, and background materials.

For more information contact your Pearson Account Manager.

Gerald Flournoy
gerald.flournoy@pearson.com • 786-385-2700

PearsonSchool.com
800-848-9500

Copyright Pearson Education, Inc., or its affiliates. All rights reserved. 6/2015